

# Careers in Research Online Survey (CROS)

## 2013 UK aggregate results

Views of research staff  
on their experiences,  
career aspirations and  
development opportunities



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## Executive summary

CROS provides greater knowledge and understanding of the views of research staff, of their experiences, career aspirations and career development opportunities to inform the implementation of the Concordat to Support the Career Development of Researchers.

8216 complete responses were received from research staff in 68 UK higher education institutions, representing a response rate of about 26%. This sample, and comparison with CROS 2011 and 2009 where appropriate, offers representative insights into the experiences of research staff employed in UK higher education with regard to the Concordat principles.

Institutions should be commended for the further progress made by the sector overall on a range of CROS 2009 recommendations, particularly in relation to recruitment and support, aspects of recognition and value, and support and career development. There has been some progress with respect to all the Concordat principles, but the extent of progress varies and the situation within individual institutions is likely to be more varied still.

### Recruitment and selection

There has been some further progress in terms of improving the openness and transparency of recruitment and appointment processes. There has been no significant change since 2011 to the proportion of research staff employed on fixed-term contracts or the proportion employed on very short contracts.

### Recognition and value

Invitation to and participation in appraisal or staff review continues to increase, with perceived levels of usefulness of appraisals maintained at similar levels.

CROS 2013 reaffirms the positive attitudes held by most respondents of their work-life balance, integration and recognition by their institution for their research activity.

Although less recognised, perceptions of recognition for wider contributions beyond research have increased slightly for one or two activities.

There are still perceptions by many respondents that they are not treated fairly in comparison with other higher education staff. Research staff who have had multiple, short-term contracts and/or long service through fixed-term contracts feel less valued and have less positive feelings about their employer, job and career. These groups of researchers, albeit a relatively small minority, remain of concern.

### Support and career development

The strong majority of research staff continue to feel encouraged to engage in personal and career development and spend at least some time on continuing professional development. The availability and take-up of training and development activities has remained broadly static and relatively low. There remains significant enthusiasm for wider experiences such as work placements or internships, with a sharp increase in the small minority that have undertaken these. The extent of engagement of research staff in teaching, lecturing, and other supervisory and management activity is significant.

### Researchers' responsibilities

The overwhelming majority of respondents claim that they take ownership of their career development, and consistently half of respondents have a career development plan. Less than half have a formal record of their development activity.

There is a significant credibility gap between respondents' career aspirations, expectations and likelihood, with over three quarters of research staff respondents aspiring to a career in higher education and around two thirds expecting to achieve this.

### Equality and diversity

The vast majority of respondents continue to believe that their institution is committed to diversity and equality and that they are treated fairly by the institution across a range of activities, including promotion, access to training and day-to-day treatment at work. However, higher and increasing proportions feel that they are not treated fairly in comparison with other staff. Slightly more female respondents and those who have had five or more contracts with their institution perceive unfairness of treatment in relation to gender and more generally career progression and promotion, reward and participation in decision-making processes.

### Implementation and review

The Concordat recognises the importance of reviewing progress toward implementing the Concordat principles both across the UK and at institutional level. The rejuvenation of CROS in 2009 and its widening utilisation has created an invaluable mechanism to capture the views and experiences of research staff in relation to the Concordat principles. CROS is now established as an important evaluation and enhancement tool for UK institutions in reviewing their implementation of the Concordat principles and providing evidence for the HR Excellence in Research Award, Athena Swan and the Research Excellence Framework (REF).

Institutions are strongly encouraged to compare their own results with the UK aggregate and benchmarking groups to assess their own progress. Even greater benefit may come through disciplinary or departmental analysis to identify pockets of good practice and progress within an institution. Learning from these may be invaluable in understanding how to make further progress in Concordat implementation.

Similarly, UK analysis of the qualitative responses could provide additional richness and insight not available through the quantitative data and draw out the key challenges and opportunities to achieve further progress in implementing the Concordat principles. Any analysis would need to protect the anonymity of respondents and institutions.

Institutions should ensure that research staff are informed of and invited to comment on the progress and on-going actions to implement the Concordat principles in institutional policies and practice.

## Summary

Comparison of the CROS 2013 aggregate results with comparable figures in CROS 2011 and CROS 2009 demonstrates that progress has been made UK-wide in the sector on many of the Concordat principles. However, the fundamental observation is that while positive progress is still being made, in many areas the rate of progress has slowed and a plateau may have been reached. Although it is fair to recommend and encourage institutions to continue the good work that has been undertaken towards greater implementation of the Concordat principles, it seems that different efforts may need to be made for there to be substantial further change in the future. Such a step change may well be more challenging and require deeper cultural shifts, as opposed to more effective provision of information and implementation of human resources development policies and practice.

The CROS 2013 results indicate that more attention is warranted with regard to the following specific 2009 (and 2011) recommendations.

**Institutions should explore whether they are tending to use short-term contracts and, if so, whether they are being used judiciously, e.g. to provide bridging funding (2011 recommendation).**

**Institutions should consider how they can recognise more fully the contribution of researchers, beyond their research activities.**

**Institutions should identify any sub-populations of researchers who do not feel integrated into their departmental or institutional communities and help them to explore career development strategies.**

**Institutions should explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen career aspirations.**

**Research staff should be encouraged to engage more actively in career development planning, using the experience of their managers, staff developers and careers advisors.**

**Institutions should increase and promote the provision of information and advice about careers, career progression and application processes within and outside academia.**

**Researchers need to be proactive in seeking out sources of information and advice in relation to career progression and employment, many of which exist already within institutions. There may be scope for career specialists and staff developers to promote the opportunities they offer more widely.**

**Institutions should review their policies for unjustified inequalities between research staff and lecturers, particularly in promotion and progression and in participation in departmental and institutional decision-making processes.**

**Institutions should review the free text responses provided by respondents to open-ended questions in order to explore in more detail issues around discrimination.**

### **New 2013 recommendations**

**Institutions are encouraged to analyse their data by subjects and departments to identify pockets of good practice and further progress. Reviewing the free text responses is likely to provide useful insights.**

**The CROS/PIRLS Steering Group should consult with institutions about the value of a UK level analysis of responses to open-ended questions in CROS, which might provide deeper insight into how further progress can be made in implementing the Concordat principles.**

## 1 Introduction

This report presents findings from the 2013 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 concerning their experiences, career aspirations and career development opportunities.

The findings are derived from aggregation of the results from the core questions common to individual CROS surveys run by 68 UK institutions in spring 2013. The report provides a snapshot of the current views of UK research staff respondents, against which individual institutions can compare and evaluate data collected in their own CROS surveys. Where the questions are comparable with those posed in CROS 2009<sup>1</sup> and 2011<sup>2</sup>, comparisons with those aggregate results are made, thereby highlighting changes in the UK higher education sector over recent years.

Since 2009 the questions in CROS have been closely linked to the Concordat to Support the Career Development of Researchers. In this way they offer evidence of progress of the sector with respect to the implementation by institutions of the Concordat principles, as well as offering insights and prompts as to potential further actions.

The complete aggregate CROS 2013 results, with comparison against CROS 2011 where appropriate, are given in Appendix 1.

### 1.1 Context

The importance of a highly skilled research workforce has repeatedly been articulated in the policy of recent governments as a key element of strategy to support research innovation and the future economic prosperity and wellbeing of the UK.

**'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.'**

David Willetts, Minister of State for Universities and Science<sup>3</sup>

The Concordat to Support the Career Development of Researchers<sup>4</sup> incorporates a set of principles to enhance the attractiveness and sustainability of research careers, and ensure the continued provision of well-trained, talented and motivated researchers. In 2012 the three-year review of the implementation of the Concordat principles confirmed significant progress<sup>5</sup>. Additionally it identified further challenges in translating institutional strategies and policies into universal practice. Participants at the 2013 Vitae Policy Forum<sup>6</sup> recognised that achieving a step-change in implementation required focus on:

- achieving recognition of research staff as full colleagues
- talent management
- transparency in respect of employment terms and conditions, reward and recognition, and career opportunities.

The alignment of CROS 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, including the Principal Investigators and Research Leaders Survey (PIRLS)<sup>7</sup>, CROS provides important measures of progress for implementation of the Concordat.

The Concordat is the mechanism through which UK institutions can demonstrate alignment with the principles of the European Charter and Code through the 'HR Excellence in Research' Award<sup>8</sup>. 80 UK organisations hold the Award, more than the rest of Europe combined.

Since April 2011, Vitae has led on the implementation of the Concordat on behalf of RCUK, the UK Funding Bodies, and the Concordat Strategy Group. Vitae provides managerial and financial support to the CROS/PIRLS Steering Group (Appendix 3) and manages the operation and publication of CROS and PIRLS.

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

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

<sup>1</sup> Careers in Research Online Survey (CROS) 2009: Analysis of aggregated UK results, Vitae [www.vitae.ac.uk/CMS/files/upload/CROS\\_2009\\_October.pdf](http://www.vitae.ac.uk/CMS/files/upload/CROS_2009_October.pdf)

<sup>2</sup> Careers in Research Online Survey (CROS) 2011: Analysis of aggregated UK results, Vitae [www.vitae.ac.uk/CMS/files/upload/CROS2011\\_Report\\_Web.pdf](http://www.vitae.ac.uk/CMS/files/upload/CROS2011_Report_Web.pdf)

<sup>3</sup> HR Excellence in Research Award press release, 2010 [www.vitae.ac.uk/policy-practice/375-327021/UK-universities-lead-Europe-in-gaining-recognition-from-the-European-Commission-for-researcher-development.html](http://www.vitae.ac.uk/policy-practice/375-327021/UK-universities-lead-Europe-in-gaining-recognition-from-the-European-Commission-for-researcher-development.html)

<sup>4</sup> Concordat to Support the Career Development of Researchers, UUK, 2008 [www.vitae.ac.uk/concordat](http://www.vitae.ac.uk/concordat)

<sup>5</sup> Three-year review of the implementation of the principles of the Concordat to Support the Career Development of Researchers, Vitae, 2012 [www.vitae.ac.uk/CMS/files/upload/Vitae-Concordat-three-year-review-report-April-2012.pdf](http://www.vitae.ac.uk/CMS/files/upload/Vitae-Concordat-three-year-review-report-April-2012.pdf)

<sup>6</sup> Vitae Policy Forum 2013, [www.vitae.ac.uk/policyforum2013](http://www.vitae.ac.uk/policyforum2013)

<sup>7</sup> Principal Investigators and Research Leaders Survey (PIRLS) [www.vitae.ac.uk/pirls](http://www.vitae.ac.uk/pirls)

<sup>8</sup> HR Excellence in Research Award [www.vitae.ac.uk/hrexcellencebadge](http://www.vitae.ac.uk/hrexcellencebadge)

## 2 CROS 2013

### 2.1 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 and others whose main function is teaching are not included. Individual institutions were responsible for identifying their target sample and promoting the survey to potential participants.

### 2.2 Methodology

CROS 2013 comprises a series of parallel surveys conducted by individual institutions, between March and May 2013. CROS 2013 was 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 core CROS 2013 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 CROS in 2009 was developed and structured to reflect the principles of the Concordat to Support the Career Development of Researchers. Some amendments were made for the 2011 survey. A review was undertaken in 2012 by the sector-led CROS/PIRLS Steering Group to ensure the question set was current and fit for purpose, which resulted in the revision and omission of some questions and the restructuring of some sections of the 2013 questionnaire. Some response options were adjusted to aid clarity of interpretation, as well as to reflect recent initiatives within the sector. The full question set can be seen in Appendix 1.

The CROS/PIRLS Steering Group agreed that the primary scope of analysis for this report should be the overall aggregate data to provide a UK overview, together with comparisons, where feasible, with the 2011 aggregate results.

Given the varied environments, infrastructure and practice to support researchers within individual institutions, responses from a particular institutional cohort may differ markedly from the aggregate responses reported here. Institutions are

encouraged to use their own data to assess their own progress with embedding the Concordat principles by comparisons with the UK aggregate results reported here, benchmarking against other groups of institutions through the BOS tool, and comparison with their results from previous surveys. Individual institutions also have the benefit of open-ended responses, which are not currently available for aggregate analysis, to provide local richness and context for quantitative results.

### 2.3 Participation and response rates

Sixty-eight higher education institutions participated in CROS 2013, comprising 20 Russell Group institutions, seven 1994 Group institutions, and 41 other institutions. Of the latter, 20 were post-'92 institutions including 15 within the University Alliance group (Table 1).

Individual institutions were responsible for identifying their research staff populations; based on these figures the total target population was just under 32,000 research staff. This represents around three quarters of the total UK population of research-only academic staff as reported in the HESA Staff Record<sup>9</sup>.

In total, 8216 complete, non-duplicate responses were used as the aggregate dataset analysed for this report, representing an overall response rate of just under 26%. Response rates within different groups of institutions were roughly similar, although response rates for individual institutions may vary.

Of the 68 institutions participating in 2013, 31 had not participated in 2011. The 27% response rate within this group of new or returning institutions was only slightly higher than those that had participated in 2011. This suggests that, broadly speaking, the response sample achieved in 2013 was a wider sample of research staff across UK institutions, but not markedly deeper within institutions than had previously been achieved. Nonetheless, in comparison with many socio-economic research surveys, a UK response rate of over 25% should be considered healthy.

**Table 1** Institutional participation and response rates for CROS 2013 compared with CROS 2011 and CROS 2009

	2013	2011	2009
Completed questionnaires	8216	5585	5908
Population sampled	c.32000	22249	28919
Response rate	26%	25%	21%
HEIs participating	68	46	51
Russell & 1994 Groups	27/35	23/38	28/38
'New' participants; response rate	31; 27%		

<sup>9</sup> HESA (2013). Resources of Higher Education Institutions 2011/12; 'research only' staff [www.hesa.ac.uk](http://www.hesa.ac.uk)

## 2.4 Profile and characteristics

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 2013 respondents compared with CROS 2011 and HESA data for UK research-only staff

	CROS 2013 %	CROS 2011 %	HESA 11/12 %
<b>Age (yrs)</b>			
30 and under	25	26	31**
31-45	58	58	53
Over 45	17	16	16
N	8026		
<b>Gender</b>			
female	54	53	47
male	46	47	53
N	7920		
<b>Ethnicity* (UK)</b>			
White (all)	85	90	89
Asian (all)	5	2	5
Black (all)	1	<1	1
Chinese	4	2	2
Other	5	2	3
N	4475		
<b>Nationality</b>			
UK	63	67	60
Other EU	22	19	40***
Rest of world	15	15	
N	7767		

\*Ethnicity for UK nationals only, recalculated to exclude those preferring not to answer

\*\*HESA age data for 2010/2011

\*\*\* HESA data combines other EU countries and the rest of the world

The age and gender profiles of CROS 2013 respondents were very similar to those obtained in CROS 2011, with around a quarter aged 30 or younger and 58% aged 31-45, although with slightly more aged 31-45 than in comparable HESA data.

54% of respondents to CROS 2013 were female, close to the proportion in CROS 2011. HESA data suggests that the proportion of female research-only staff is 47%, and has been growing in recent years. It is believed that the higher proportion amongst CROS respondents may simply relate to the common observation in many surveys that females tend to be more likely to respond to surveys than males.

The proportion of respondents of UK nationality was 63%, with 22% from other European Union countries and 15% from the rest of the world. The proportion of other EU respondents was higher than in 2011 (19%) and the UK proportion correspondingly lower. The proportion of UK respondents is similar to the most recently available figure for UK research-only staff from HESA of 60%.

The ethnicity of respondents was investigated only for those of UK nationality. Of those who stated their ethnic background, 85% of UK national respondents selected a 'White' category, which is slightly lower than the figure recorded in HESA staff data (2011/12) of 89%. The proportion identifying that they were of Asian origin was similar to that in the HESA data (at almost 5%), and higher than previously recorded in CROS. Four per cent of UK respondents stated their ethnic background as Chinese, which was also higher than previously. The ethnicity profile did not differ substantially between different groups of institution, or between those institutions which had previously participated in CROS and were new to CROS 2013, suggesting that any change to the ethnicity profile of respondents should not be attributed to different sampling in 2013.

Just over 2% of respondents considered that they had a form of disability, very similar to recent HESA figures of around 2% for research-only staff.

In CROS 2013, respondents were asked to identify their main subject specialism using the Units of Assessment with the Research Excellence Framework (REF). In Table 3, the breakdown of respondents amongst the four main REF Panels and certain key subjects is shown. HESA staff record data is not yet available using these groupings, so a general comparison is made by mapping Units of Assessment, and the JACS subject group<sup>10</sup> breakdown used in CROS 2011, to HESA Cost Centres.

The subject specialisms of CROS 2013 and CROS 2011 respondents are very similar, and there is a broad match with HESA staff record data in many Cost Centre groupings, with the exception of Medicine, Dentistry & Health and the broadly defined Biological, Mathematical & Physical Sciences groups. This may suggest classification issues around biological and biomedical science areas, as has been seen in previous CROS results. Comparison with HESA staff data would be more robust if REF Unit of Assessment data becomes available for all research-only staff. In the meantime what can be confirmed is that the CROS 2013 respondent sample covers the similarly wide range of research disciplines that were represented in CROS 2011.

<sup>10</sup> JACS (Joint Academic Coding System). [www.hesa.ac.uk/index.php?option=com\\_content&task=view&id=158&Itemid=233](http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=158&Itemid=233)



**Table 3** Main subject specialism of respondents for their current contract

	CROS 2013 (%)	CROS 2011 (%)	HESA 2011/12 (%)
REF Panel A (medical, biological sciences and agriculture)	49		
REF Panel B (physical sciences, engineering and mathematics)	30		
REF Panel C (social sciences, including education)	15		
REF Panel D (languages, humanities and creative arts)	5		
N	8030		
<b>HESA Cost Centre</b>			
Medicine, Dentistry & Health	23	21	39
Agriculture, Forestry & Veterinary	1	1	2
Biological, Mathematical & Physical Sciences	41	43	28
Engineering & Technology	14	16	16
Architecture, Building & Planning	1	1	1
Administration, Business & Social Sciences	12	13	8
Humanities & Languages	4	4	3
Design, Creative & Performing Arts	2	1	1
Education	2	2	2

## 2.5 Representativeness of the sample

Statistically, for any random sample of a known size from a known total population, the confidence interval (effectively the error bar) can be calculated for a certain level of confidence. Typically, statistical analysis is conducted on the basis of a 95% confidence level. On this basis, 8216 CROS responses from a target population of around 32,000 research staff targeted, produce a confidence interval of less than 1% for mid-range percentages (i.e. an error bar of less than 1%), while for smaller percentage results it is smaller still (the error bar is less than 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.

The representativeness of a sample can also be assessed by comparing the demographic profile of the sample with what is known of the target population. The profile of the CROS 2013 sample seems to compare reasonably well with known parameters of the overall UK research staff population in terms of gender, nationality, ethnicity and disability, and matches the shape of the CROS 2011 sample very closely. While it is not clear that there is a match across subject disciplines, it seems likely that this relates more to classification issues in either the HESA or CROS data, or both.

Taken together with the low confidence interval, it is thought that the CROS 2013 sample provides an accurate representation of both the participating institutions in 2013 and the UK higher education research staff population as a whole.

## 2.6 Comparability with CROS 2011

One of the key potential benefits of CROS is the opportunity to use it as a device to measure progress in relation to embedding the principles of the Concordat to Support the Career Development of Researchers within institutions' human resources and employment practice. This can be achieved by comparing results from successive CROS surveys where there are consistent questions, assuming the aggregate samples are representative of the wider research staff population.

Of the 68 institutions participating in CROS 2013, 37 had also participated in 2011. The responses from those 37 institutions made up almost 60% of all responses in 2013, giving a substantial overlap in the potential research staff populations sampled. Comparative analysis of responses from institutions which had participated in 2011 and those that had not, did not reveal any significant or systematic differences. Therefore, it is safe to assume that, provided each survey is representative of its population, comparison of the UK aggregate results for 2013 and 2011 should be reasonably robust.

### 3 Results

The aggregated results for CROS 2013 are presented in Appendix 1, with comparative data from CROS 2011 where appropriate. Appendix 2 highlights those results which contribute to the measures of progress in implementing the Concordat to Support the Career Development of Researchers, including comparisons with results from CROS 2011 and CROS 2009. In this section we summarise the overall trends in CROS 2013 results and highlight particular results and topics of interest.

#### 3.1 Recruitment and selection

##### Employment 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 2013 respondents reported that they were currently employed on a fixed-term contract, and 21% on an open-ended contract, with the remainder not wishing to respond. The proportion with a current fixed-term contract in CROS 2011 was similarly 77%, compared with 82% in 2009.

When analysed by mission group, the proportion with fixed-term contracts in Russell and 1994 Group institutions was 80%, while in other institutions it was lower at 67%. Analysed using the broad subject-based REF Panels, the proportion of fixed-term contracts was higher (80%) in Panel A (medical, biological sciences and agriculture) and Panel B (physical sciences, engineering and mathematics), than Panel C (social sciences, including education) and Panel D (languages, humanities and creative arts) at less than 70%.

Compared with the overall average research staff profile, those with open-ended contracts tended to be:

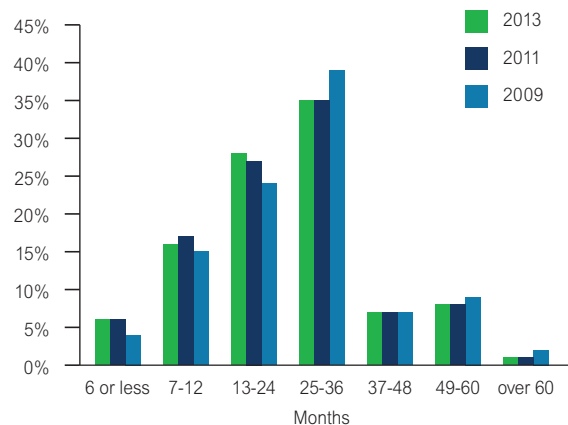
- older and/or with greater length of employment (and more previous contracts) as research staff
- employed in University Alliance institutions
- working in applied health specialisms or REF Panel C subjects (particularly social sciences)
- funded by their institution.

Overwhelmingly research staff are employed on a fixed-term basis at the earlier stages of their research career or employment within the institution. 92% of all respondents under 30 years old were employed on a fixed-term basis. Just under 82% of respondents currently on their first contract with their institution were employed on a fixed-term contract.

For those respondents with fixed-term contracts, the most prevalent length of contract was between two and three years (35%), while 22% reported being employed on a contract of one year or less. The CROS 2011 report highlighted concern over a distinct shortening of average contract length between the 2009 and 2011 results across all groups of institutions.

The distribution of current fixed-term contracts reported by CROS 2013 is very similar to that seen in 2011.

Overall since 2011, there has been no measureable reduction in the use of fixed-term contracts of employment. However, the trend towards an increase in the use of fixed-term contracts of less than two years appears to have broadly stabilised (Figure 1).



**Figure 1** Length in months of current employment contract for respondents currently on a fixed-term contract; N=5228/(2013)

Although nearly half (43%) of respondents who were over 45 years old were employed on an open-ended contract, a high proportion of those who remained on fixed-term contracts after long service with an institution had a short-term contract. For example, 43% of those who had had five or more contracts with their institution now had a contract of a year or less in duration.

Analysis of responses to questions about recruitment revealed that around 20% of those with a very short contract (a year or less) had been recruited on the basis of an extension to a previous contract.

##### Recruitment and appointment processes

The Concordat to Support the Career Development of Researchers seeks open and transparent recruitment policies and for job descriptions and all other relevant information to be supplied to applicants. In CROS 2013 questions relating to recruitment to current post were targeted only at those who had taken up their post within the last two years, whereas in previous CROS this had not been stipulated. With that proviso, a lower proportion of CROS 2013 respondents had learned about the vacancy by word of mouth (24%, compared with 28% in 2011 and 30% in 2009) and 44% had seen it advertised.

In terms of the information provided to respondents during their application process for their current post, the proportions of respondents reporting provision of a written job description and details of qualifications required, research skills needed and transferable/personal skills required, all increased in comparison with CROS 2011 and 2009.

Further increases were seen in relation to the proportion of respondents reporting that when starting their current role they had been offered a local induction, a departmental/faculty/unit induction, and an institution-wide induction. These figures were consistently higher than had been reported in CROS 2011, which in turn were higher than those in CROS 2009. Levels of take-up and perceived usefulness of the three types of induction were all slightly higher than reported in CROS 2011. With around 75% of respondents now being offered inductions, the process appears to have become widespread in the appointment of research staff.

## 3.2 Recognition and value

### 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' so the extent of appraisal is a simple quantitative measure of this.

Based on CROS 2013 responses, further progress appears to have been made in terms of the extent of participation in appraisal or review. In CROS 2009, 50% of respondents stated they had participated in an appraisal or staff review in the last two years, compared with 55% in CROS 2011 and almost 60% reported by CROS 2013 respondents. This improvement can be tracked as a long-term trend as the first CROS survey in 2002 revealed that only 32% of respondents had ever taken part in their institutional staff review process. Nevertheless there is still some way to go before levels of appraisal of research staff reach that amongst principal investigators and research leaders, who are in many cases the managers of research staff; this figure is over 80% (PIRLS 2013).

The prevalence of appraisal was higher amongst those with open-ended contracts at 78%, compared with 54% of those employed on a fixed-term basis. It was somewhat higher for institutions (65%) outside the Russell and 1994 Groups (58%).

Of the approximately 40% of respondents who had not had an appraisal, there was a decrease in the proportion who reported that they had not been invited to do so (38% of those 40%), compared with 44% of the 45% who had not been appraised in CROS 2011. Around 30% of those who had not had an appraisal indicated that this was because they had only recently been appointed.

Of those respondents who had participated in an appraisal or review within the last two years, 59% reported that they had found it useful or very useful overall, slightly below the figure of 62% in 2011. Reflections on its usefulness in relation to other issues were reported in a very similar fashion to CROS 2011 (Appendix 1).

### Recognition of researchers' contributions

CROS 2009 recommended that institutions consider how they recognise fully the contribution of researchers beyond their research activities. For CROS 2013 the questions and response options relating to recognition and value were revised, so comparison is not always straightforward. However, after normalising for the removal of a 'don't know' response option in 2013, many results are very similar to those obtained in 2011 (Table 4). There was some reduction in perceived recognition and value in relation to managing finances and staff. For all other options two thirds or more felt that they were recognised and valued by their institution for these contributions.

### Integration and fair treatment

Responses to questions on the perceived integration of research staff within their department's research community, institution and wider discipline, and to respondents' perceptions as to whether they were treated fairly in comparison with other staff, were very similarly distributed to those obtained in CROS 2011 (Appendix 1), and significantly improved on CROS 2009. There remain small groups of researchers, mainly on multiple short-term contracts and/or long service, who reported less integration and satisfaction.

**Table 4** Respondents' perceptions of whether their institution both recognises and values their contributions in relation to selected activities\*

	CROS 2013 Agree/strongly %	CROS 2011 Agree/strongly %	N
Grant/funding applications	69	67	8115
Knowledge transfer and commercialisation activities	68	67	8075
Managing budgets/resources	54	60	8071
Peer reviewing	51		8048
Publications	82	82	8091
Public engagement with research	69	70	8057
Supervising/managing staff	55	61	8090
Supervising research students	61	65	8102
Teaching and lecturing	60	59	8098

\* Expressed as percentage agreement, normalised to exclude those for whom not applicable.

<sup>11</sup> Principal Investigators and Research Leaders Survey (PIRLS) 2013 UK aggregate results, Vitae 2013 [www.vitae.ac.uk/pirls](http://www.vitae.ac.uk/pirls)

### 3.3 Support and career development

#### Engagement in career development

Around three quarters of CROS 2013 respondents felt encouraged to engage in personal and career development, 87% considered that they took ownership of their career development and just over half had a clear career development plan. These were very similar figures to those in CROS 2011. Over half claimed to maintain a formal record of their continuing professional development (CPD) activities. This was not directly comparable with the 70% for CROS 2011 respondents, which did not specify 'formal' recording.

The extent of participation in training and other CPD reported by respondents, in terms of the number of days during the past 12 months, was very similar to that reported in CROS 2011. The same proportion (21%) stated that they had not undertaken any days of training or other CPD in the previous 12 months, while around 10% had undertaken ten days or more. This is slightly lower than the amount of training or CPD reported by principal investigators and research leaders in PIRLS 2013, where 16% reported no activity and 12% ten days or more.

In parallel, the areas in which respondents had undertaken training and other CPD activity, and indicated that they would like to do so, were remarkably similar to the pattern in 2011. A slightly higher proportion indicated that they had undertaken leadership and management training, but for all other options the differences from 2011 (for comparable options) were not significant (Appendix 1).

#### Developmental experiences and wider contributions

Previous CROS surveys have proved useful in learning about the diverse activities undertaken by research staff, both as part of their research activity and more widely in their institution. The range of options available in these questions was revised in CROS 2013 to provide more robust measures across the range of these activities and contributions, particularly collaborating with and supporting others.

Table 5 summarises a number of these responses, indicating a rising extent of collaborative working, including with international and other external colleagues. While the option on collaborative research with external organisations had been intended to probe collaborations outside higher education (65%), it is possible that respondents have interpreted this as external collaboration with other institutions.

Although the proportion undertaking a placement or internship outside higher education remains small (9%), this is significantly higher than the 5% previously reported despite the option being more precisely specified in 2013. The proportions undertaking public engagement and knowledge exchange activity remain similar to those reported in 2011; however, the proportions that would like to do these activities have risen.

The results also reveal the considerable extent of supervisory and teaching work undertaken by research staff, with over half active in teaching or lecturing and supervising research projects, and almost half supporting or mentoring other researchers. It was noticeable that there was a rise in the proportion undertaking financial management activities, managing a budget or writing funding proposals, while financial management was one area where respondents had reported a decrease in perceived recognition (section 3.2.2).

**Table 5** Respondents development activities and wider experiences during their current role

	% Have done this	% Would like to do this	N
Collaborate with colleagues outside UK	66 [61]	30 [33]	8093
Collaborative research with external organisations*	65	30	8071
Work as part of cross-disciplinary team	59 [54]	34 [37]	8075
Undertake internship/placement outside HE	9 [5]	42	8044
Knowledge exchange	32	51 [45]	7992
Participate in public engagement	40	40 [37]	8025
Engage with policymakers and end users*	30	45	8037
Supervise undergraduate or postgraduate research projects*	58	31	8047
Mentor or support other researchers*	47	40	8048
Teach or lecture*	52	31	8038
Manage a budget	38 [35]	43 [38]	8052
Write a grant/funding proposal	54 [49]	38 [41]	8057

\* Indicates new response option

CROS 2011 results in square parentheses where different from 2013 result (and option is comparable)

### 3.4 Researchers' responsibilities

The Concordat to Support the Career Development of Researchers places significant emphasis on research staff themselves to take responsibility for their own development and career planning, including being informed about employment and progression and seeking sources of information in relation to these.

#### Awareness of personal and development support initiatives

CROS 2013 repeated a number of question options in relation to respondents' knowledge and understanding of certain key initiatives relevant to research staff employment and career development, and introduced new options relating to initiatives since 2011.

The proportions who reported understanding or awareness of the Concordat to Support the Career Development of Researchers were lower than in 2011 (Table 6). This may reflect the passage of time since its introduction and widespread promotion during its launch in 2008 as well as research staff turnover. Awareness levels were also slightly lower in relation to the Vitae programme, but slightly higher in relation to the European HR Excellence in Research Award. Understanding and awareness were somewhat higher for the Athena Swan Charter, although this was highly variable with subject discipline. Almost two thirds of those working in REF Panel A subjects (medical, biological sciences and agriculture) had heard of Athena Swan, while this was less than a quarter of Panel D respondents (languages, humanities and creative arts), unsurprisingly given the initiative's current focus.

Almost a half of respondents were aware of the Vitae Researcher Development Framework (RDF), a slight fall overall from 2011. There was low awareness of the Concordat for Engaging the Public with Research and the Concordat to Support Research Integrity, which may be due to their relative infancy. There was greater understanding of the RCUK Pathways to Impact.

Unsurprisingly, there was much higher (but not universal) awareness of the Research Excellence Framework (REF), including a clear shift from awareness to some understanding since 2011. Notably, levels of awareness of the REF were lower amongst Panel A and Panel B respondents than Panel C and Panel D. It was also lower amongst those of other nationalities (25% unaware) than amongst those of UK nationality (10% unaware). There was slightly lower awareness amongst those on their first contract with their institution (19%) compared to 15% overall.

#### Career aspirations and expectations

Respondents were asked to indicate both their long-term career aspiration and their expectation of the occupation in which they would actually work in the long term. Overall, 78% of respondents aspired to work within higher education (HE) with 62% expecting to achieve this, in each case over half combining teaching and research (Figure 2). The proportion aspiring to work in non-HE research was around 10%, similar to the proportion who expected to work there in the long term. 16% of respondents did not know where they expected to work in the long term.

When analysing career aspirations and expectations by different sub-populations such as gender, age, mission group and domicile, some significant differences emerged.

Overall, the proportion aspiring to work in higher education was relatively consistent across almost all sub-groups analysed, with around 78% of females or Russell and 1994 Group respondents. Aspirations were slightly higher at 82% for male respondents and those over 45 years of age. Respondents aged 30 or under had the lowest aspiration to work long term in higher education at 70%, although this is still significantly higher than the percentage for likelihood.

There were some detailed differences between groups in terms of the specific occupational role. Greater proportions of male rather than female respondents, young rather than older respondents, and non-EU rather than UK respondents, aspired to a combined teaching and research role in higher education. Research-only roles were relatively more attractive to female respondents and those aged over 45.

**Table 6** Respondents' awareness of selected UK initiatives in relation to career development and support

	Some understanding %	Know it exists only %	Never heard of it %	N
Concordat for Support for the Career Development of Researchers	14 [22]	23 [35]	63 [43]	8087
Vitae	20	25 [31]	55 [50]	8078
European HR Excellence in Research Award recognition	6 [4]	26 [24]	68 [72]	8049
Athena Swan Charter for Women in Science	24	31	45	8104
Concordat for Engaging the Public with Research	8	23	69	8080
Concordat to Support Research Integrity	5	18	78	8050
RCUK 'Pathways to Impact'	18	29	53	8014
REF (Research Excellence Framework)	61 [54]	24 [35]	15 [11]	8097
Vitae Researcher Development Framework (RDF)	15	22	63	8053

CROS 2011 results in square parentheses, where results differ from 2013.

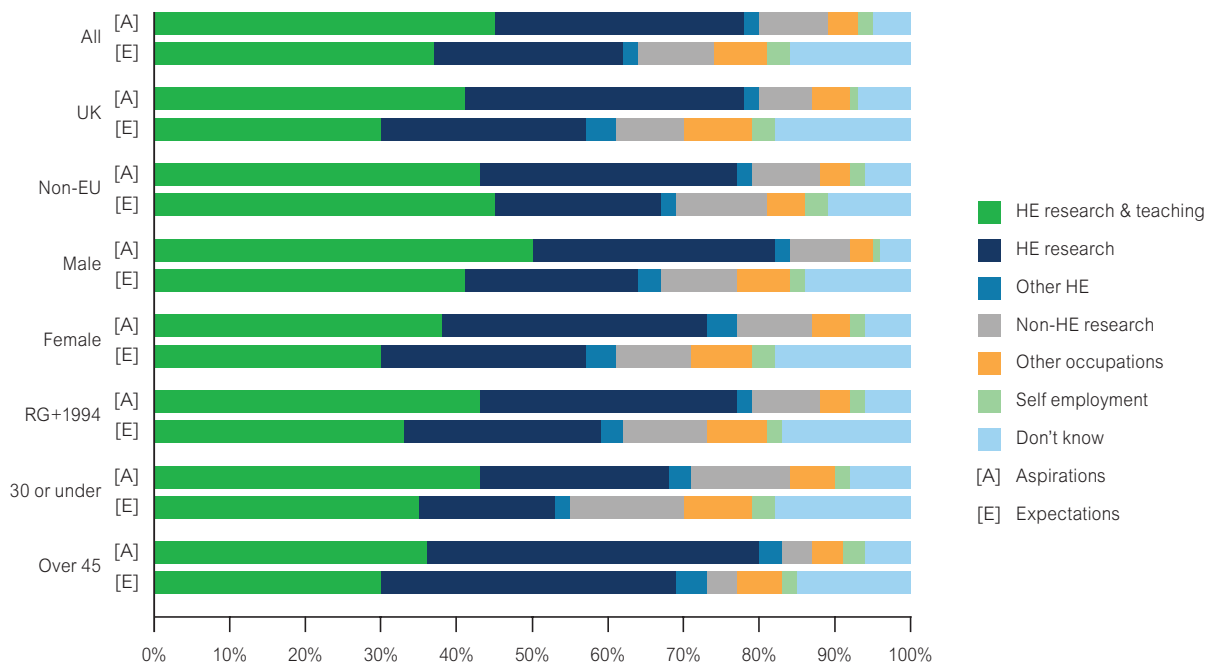


Figure 2 Respondents' long-term career aspirations and expectations

The sub-group amongst whom the largest proportion aspired to work in research outside higher education was those aged 30 or under, at just under 15%.

In terms of actual career expectations, non-EU respondents had the highest proportion (70%) who expected to work in higher education, including 46% who expected a combined teaching and research role. Male respondents were slightly more confident overall than female respondents of a higher education career, although a higher proportion of female than male respondents expected to work in higher education research-only roles in the long term. Just over half of respondents aged 30 and under (56%) expected to work in higher education, while this was almost three quarters of those aged over 45, presumably reflecting that a much higher proportion of this group had open-ended contracts and were reasonably confident of remaining in higher education into the later stages of their careers.

The proportion who did not know their long-term expectation was somewhat higher amongst female respondents, those from the UK, in Russell and 1994 Group institutions and of age 30 or younger.

The discrepancy between career aspiration and expectation, at least in terms of a higher education career, seemed to be fairly constant for all sub-groups, but was somewhat lower amongst non-EU respondents and those aged over 45.

On the basis of what is known of UK higher education workforce statistics, it seems likely that the expectations of many respondents seeking a long-term career in higher education will not be fulfilled. It is unrealistic to expect that two thirds of current research staff, or even half of those in the early stages of their career, will be able to secure a long-term career in higher education, particularly in the UK. This reinforces the importance of institutions providing research staff with useful

performance reviews and access to information on the range of career opportunities available.

### 3.5 Equality and diversity

The vast majority of respondents to CROS 2013 believed that their institution was committed to equality and diversity (with fewer than 10% dissenting) and that it treated staff fairly irrespective of age, gender and other legally recognised personal characteristics. These results were very similar to those obtained in CROS 2011, with consistent incremental increases in the strength of agreement. For example, 79% of respondents believed treatment was fair irrespective of age, compared with 78% in 2011, but a higher proportion (32%, compared with 28%) strongly agreed that this was the case.

The only personal characteristic for which there was any discernible negative shift in perception of fair treatment was for gender. Overall, almost 14% of respondents disagreed that their institution treated staff fairly irrespective of gender, slightly higher than the 11% recorded in CROS 2011. When analysed by gender of respondents, 18% of female respondents disagreed, slightly higher than had been the case in 2011 (15%) and considerably higher than the 8% of males who disagreed. However, the proportion of male respondents perceiving unfairness of treatment by gender has risen compared with levels reported in 2011.

When analysing perceptions of unfairness regarding different aspects of employment, these were expressed more strongly by female respondents in relation to career progression/promotion, reward and participation in decision-making, than to other aspects. Between 20% and 25% of female respondents believed that staff at their institution were not treated fairly in these areas. Similarly CROS 2011 identified female respondents reporting more perceived unfairness in staff treatment for the

**Table 7** Extent of agreement that institution treats staff fairly, irrespective of personal characteristics, amongst female and male respondents

	<b>% Disagree/strongly; females N=4264</b>	<b>% Disagree/strongly; males N=3590</b>
Career progression/promotion	25 [18]	18 [14]
Participation in decision-making	22 [15]	17 [15]
Reward	21 [15]	16 [12]
Day-to-day treatment at work	11 [8]	7 [7]
Recruitment and selection	14 [8]	13 [6]

CROS 2011 results in square parentheses.

**Table 8** Extent of agreement that institution treats staff fairly, irrespective of personal characteristics, amongst respondents who have had five or more contracts with current institution

	<b>% Disagree/strongly; five or more contracts N=986</b>	<b>% Disagree/strongly; all respondents N=8067</b>
Career progression/promotion	33 [26]	22 [16]
Participation in decision-making	29 [20]	20 [15]
Reward	27 [20]	18 [14]
Day-to-day treatment at work	8 [7]	9 [8]
Recruitment and selection	20 [10]	14 [7]

CROS 2011 results in square parentheses.

same three issues, although the extent of negative perceptions was lower (Table 7). Results for day-to-day treatment at work and recruitment and selection show broadly similar trends but to a lesser degree.

Female respondents to PIRLS in 2011 and 2013 also reported the most widespread perceptions of unfairness in relation to the same three specific areas (progression/promotion, reward and participation in decision-making) amongst principal investigators and research leaders, and by broadly similar proportions.

Previous CROS reports identified that perceptions of unfair treatment were most common among the sub-group of respondents who had had five or more contracts with their current institution. In CROS 2013, 33% of this group disagreed that they were treated fairly in relation to promotion and progression, 29% in relation to participation in decision-making and 27% in relation to reward, all slightly higher than recorded in CROS 2011.

Conversely, when asked for perceptions on whether the institution treats the respondent fairly in comparison with other types of staff, considerably higher figures were obtained (where options were comparable), particularly for some sub-groups. For example, 64% of respondents with five or more contracts at their current institution did not believe they were treated fairly in comparison with other staff in relation to opportunities for promotion and progression, and 52% in relation to participation in decision-making processes. The figures are distinctly higher than observed in CROS 2011. Results from this sub-group were also much higher for this group than for respondents as a whole (Table 9) in both 2011 and 2013. Responses from female respondents to these questions were very similar to those received from males. It should be noted that perceptions of unfairness of treatment in comparison with other types of staff in relation to other opportunities and terms and conditions were at much lower levels, e.g. day-to-day treatment at work (Appendix 1).

**Table 9** Extent of agreement that institution treats research staff fairly in comparison with other types of staff, for different groups of respondents

	<b>% Disagree/strongly; 5 or more contracts N=989</b>	<b>% Disagree/strongly; females N=4275</b>	<b>% Disagree/strongly; all respondents N=8045</b>
Opportunities for progression/promotion	64 [58]	49 [41]	48 [40]
Participation in decision-making	52 [41]	39 [31]	40 [31]

CROS 2011 results in square parentheses.

Taken together, these results suggest that research staff generally perceive more unfairness of treatment in relation to promotion and progression, and participation in decision-making processes in comparison with other types of staff, than between sub-groups within the research staff population, e.g. females and those with repeated multiple contracts at the institution.

Although there has been an increase in the proportion of research staff, particularly in certain groups, that perceive unfair treatment in relation to some aspects of employment, there

was no decrease in the overall perception of their institution's commitment to equality and diversity.

Around 70% of respondents indicated that they were satisfied with their work/life balance, very similar to the proportion observed in CROS 2011, and markedly higher than observed for research leaders in the 2011 and 2013 Principal Investigators and Research Leaders Surveys (PIRLS), at around 50%. The extent of this perception was not significantly different between male and female research staff.



## 4 Progress against 2009 recommendations

This section provides a brief overview of progress by Concordat principle. Appendix 2 summarises progress against the CROS 2009 recommendations demonstrated by CROS 2013 and 2011 aggregate results, providing an indication of overall sector progress towards implementation of the principles of the Concordat over the previous four years. Specific 2009 (and 2011) recommendations are highlighted below where CROS 2013 results indicate more attention is warranted.

### 4.1 Recruitment and selection

There has been some further progress in terms of improving the openness and transparency of recruitment and appointment processes. Higher proportions, and the vast majority of respondents, were supplied with job descriptions and other employment-related information on application for their current role, and were offered inductions when they started. There was no significant change to the proportion of research staff employed on fixed-term contracts, but evidence suggested that there had been no further increase, or decrease, in the use of very short contracts since 2011.

#### Relevant 2011 recommendation

**Institutions should explore whether they are tending to use short-term contracts and, if so, whether they are being used judiciously, e.g. to provide bridging funding.**

### 4.2 Recognition and value

The 2013 results reaffirm the positive attitudes held by most respondents in terms of their work-life balance, community integration and feeling recognised and valued by their institution for their research activity. Perceptions of feeling recognised and valued for wider contributions beyond research, have been maintained and increased slightly for one or two activities. On the other hand there has been no reduction in the perception held by many respondents that they are not treated fairly in comparison with other higher education staff, and if anything this has increased, particularly in certain sub-populations.

Participation in appraisal or staff review has risen still further, and the proportion of respondents claiming that they have not been invited to undertake appraisal has also fallen. The perceived levels of usefulness of appraisals have been maintained at similar levels.

There remain some sub-groups of research staff, such as those who have had multiple, short-term contracts and/or long service through fixed-term contracts, who feel less valued and retain less positive feelings about their employer, job and career. These groups of researchers, albeit a relatively small minority, remain of concern.

#### Relevant 2009 recommendations

**Institutions should consider how they can recognise more fully the contribution of researchers, beyond their research activities.**

**Institutions should identify any sub-populations of researchers who do not feel integrated into their departmental or institutional communities and help them to explore career development strategies.**

### 4.3 Support and career development

The vast majority of research staff continue to feel encouraged to engage in personal and career development and spend at least some time on continuing professional development, with about 1 in 10 spending over ten days per year.

The availability and take-up of training and development activities have remained broadly static compared with 2011 and 2009. There remains significant enthusiasm for wider experiences such as work placements or internships, and the small minority that have undertaken these has risen quite sharply, but still remains less than 10%. The extent of teaching and lecturing, other supervisory and management activity is significant and offers opportunities for research staff to develop through these types of wider activity beyond their core research work.

#### Relevant 2009 recommendations

**Institutions should explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen career aspirations.**

## 4.4 Researchers' responsibilities

The overwhelming majority of respondents claim that they take ownership of their career development, and consistently half of respondents have a career development plan. A significant number, but less than half, have a formal record of their development activity, but the extent and nature of training and continuing professional development activity undertaken remain broadly static.

Over three quarters of research staff respondents aspire to a career in higher education in the long term, and around two thirds expect to achieve it, while one in six do not know what they will end up doing as a career. This suggests a significant credibility gap between career aspirations, expectations and likelihood.

### Relevant 2009 recommendations

**Research staff should be encouraged to engage more actively in career development planning, using the experience of their managers, staff developers and careers advisors.**

**Institutions should increase and promote the provision of information and advice about careers, career progression and application processes within and outside academia.**

**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.**

## 4.5 Equality and diversity

The vast 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. Higher, and possibly slightly increasing, proportions feel that they are not treated fairly in comparison with other staff at their institution. There has been a slight rise in the proportion of female respondents, and those who have had five or more contracts with their institution, who perceive some unfairness of treatment in relation to gender and more generally career progression and promotion, reward and participation in decision-making processes at their institution.

### Relevant 2009 recommendations

**Review institutional policies for unjustified inequalities between research staff and lecturers, particularly in promotion and progression and in participation in departmental and institutional decision-making processes.**

**HEIs should review the open-ended responses provided by respondents in order to explore in more detail issues around discrimination.**

## 4.6 Implementation and review

CROS is now established as an important evaluation and enhancement tool for UK institutions in reviewing their implementation of the Concordat principles and providing evidence for the HR Excellence in Research Award. The number of institutions participating in CROS increased to 68 in 2013 thereby achieving 8216 responses, almost 50% higher than in 2011 and representing around a quarter of the total UK research staff population. The CROS UK aggregate results provide a robust and illuminating insight into the UK's progress in achieving the vision of the Concordat.

Comparison of the CROS 2013 aggregate results with comparable figures in CROS 2011 and CROS 2009 demonstrate that progress has been made UK-wide in the sector on many of the Concordat principles. However, in some areas progress has reached something of a plateau. Comparison of institutional results with the CROS aggregate figures will be valuable to assess the extent of local progress, while even greater benefit may come from identification of pockets of stronger practice and progress within institutions. Identifying and learning from these may be valuable in understanding how to make further progress in Concordat implementation.

Similarly, it may be useful to undertake a UK analysis of the qualitative responses made by individual respondents to open-ended questions to provide additional richness and insight not available through quantitative data. Such an analysis could draw out key challenges and opportunities to achieve further progress in implementing the Concordat principles. Any analysis would need to protect the anonymity of respondents and institutions.

### New 2013 recommendation

**Institutions are encouraged to analyse their data by subjects and/or departments to identify pockets of good practice and further progress. Reviewing the free text responses to open-ended questions is likely to provide useful insights.**

**The CROS/PIRLS Steering Group should consult with institutions on the value of a UK level analysis of responses to open-ended questions to provide deeper insight into how further progress can be made in implementing the Concordat principles.**

## 5 Conclusions

The CROS 2013 aggregate results present what is believed to be a representative view across the UK higher education sector of the attitudes and activities of research staff, recorded through the responses of research staff in an even wider range and number of institutions than have previously taken part. As a tool to monitor sector progress in terms of implementing the principles of the Concordat to Support the Career Development of Researchers, it remains invaluable. Additionally it provides institutions with a key monitoring tool to support their participation in researcher development and its recognition under schemes such as the HR Excellence in Research Award, the Athena Swan initiative and the Research Excellence Framework (REF).

Institutions should be commended for the further progress made by the sector overall on a range of recommendations, particularly in relation to recruitment and support, aspects of recognition and value and support and career development. There has been some progress with respect to all the Concordat principles, but the extent of progress varies across that range and the situation within individual institutions is likely to be more varied still.

The fundamental observation from this report is that while some further positive progress is being made, in many areas the rate of progress has slowed and a plateau has perhaps been reached. Although it is fair to recommend and encourage institutions to continue the good work that has been undertaken towards greater degrees of implementation of the principles of the Concordat, it seems that different efforts may need to be made for there to be substantial further change in the future. Such a step change may well be more challenging and require deeper cultural shifts, as opposed to more effective provision of information and implementation of human resources and development policies and practice.

Institutions are strongly encouraged to make use of their own survey results, and make comparisons with other institutions, the UK aggregate and benchmarking groups, to assess their own progress. They should ensure that research staff are informed of and invited to comment on the progress and on-going actions to implement the Concordat principles in institutional policies and practice.

The Concordat recognises the importance of reviewing progress toward implementing the Concordat principles both across the UK and at institutional level. The rejuvenation of CROS in 2009 and its widening utilisation has provided a valuable mechanism to capture the views and experiences of research staff in relation to the principles. The CROS/PIRLS Steering Group will continue to refine and deploy the survey so it encourages institutions to strive to improve their provision for research staff, enhance their provision through sharing practice and identify clear evidence of their progress in implementation of the Concordat principles.

## Appendix 1: CROS 2013 UK aggregate results

Results from CROS 2011 are shown [x] only where questions were comparable and where there was a difference between the 2013 and 2011 results. Underlined text indicates where question wording is different from CROS 2011.

### Section 1 – About your research career

In this section we are interested in your career as a member of research staff in higher education and your current employment.

Please exclude any time studying for a doctorate, unless you did that whilst being employed as a researcher.

1. Excluding any period of doctoral study
  - A How long have you been a researcher?
  - B How long have you been a researcher at this institution?
  - C How long have you been a researcher at other HE or research institutions in the UK?
  - D How long have you been a researcher at other HE or research institutions outside the UK?
  - E How long have you been a researcher in other sectors?

Years	< 1	1	2	3	4	5	6	7	8	9	10	> 10	Not applicable	N
A	8.9	5.6	10.6	9.4	8.5	8.2	6.0	5.7	4.7	3.4	4.2	24.5	0.3	8159
B	20.2	11.3	16.3	10.9	8.3	6.8	4.4	3.9	3.0	1.8	1.7	11.0	0.4	8137
C	6.5 [11]	5.6	6.6	6.3	4.9	3.9	2.4	2.0	1.6	0.9	1.3	6.9	51.1	8089
D	4.9 [10]	5.1	3.9	3.9	3.1	2.5	1.6	1.2	0.7	0.4	0.5	2.1	68.4	8077
E	3.6	3.5	3.1	2.0	1.3	0.9	0.7	0.4	0.3	0.2	0.5	1.6	82.0	8061

2. How many individual contracts of employment as a researcher have you had with your current institution?  
N=8019

1	47.4
2	21.1
3	12.5
4	6.5
5 or more	12.5

3. Are you currently employed... N=8086

Full-time?	85.5
Part-time?	14.5

4. What is the nature of your current contract? N=7740

Fixed-term	77.0
Open-ended (can be known as 'permanent')	21.4
Not sure	1.5

If fixed-term, what is the total length of your contract? N=5228

6 months or less	5.5
7 - 12 months	16.2
13 – 24 months (1-2 years)	27.9
25 – 36 months (2-3 years)	34.6
37 – 48 months	6.9
49 – 60 months	7.9
More than 5 years	1.1

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

N=8030

Panel A		
A1	<u>Clinical Medicine</u>	4.4
A2	<u>Public Health, Health Services and Primary Care</u>	9.2
A3	<u>Allied Health Professions, Dentistry, Nursing and Pharmacy</u>	2.5
A4	<u>Psychology, Psychiatry and Neuroscience</u>	6.8
A5	<u>Biological Sciences</u>	24.7
A6	<u>Agriculture, Veterinary and Food Science</u>	1.3
Panel B		
B7	<u>Earth Systems and Environmental Sciences</u>	3.8
B8	<u>Chemistry</u>	4.9
B9	<u>Physics</u>	5.3
B10	<u>Mathematical Sciences</u>	2.5
B11	<u>Computer Science and Informatics</u>	4.9
B12	<u>Aeronautical, Mechanical, Chemical and Manufacturing Engineering</u>	3.0
B13	<u>Electrical and Electronic Engineering, Metallurgy and Materials</u>	3.5
B14	<u>Civil and Construction Engineering</u>	0.8
B15	<u>General Engineering</u>	1.7
Panel C		
C16	<u>Architecture, Built Environment and Planning</u>	0.9
C17	<u>Geography, Environmental Studies and Archaeology</u>	2.8
C18	<u>Economics and Econometrics</u>	1.3
C19	<u>Business and Management Studies</u>	1.8
C20	<u>Law</u>	0.7
C21	<u>Politics and International Studies</u>	1.0
C22	<u>Social Work and Social Policy</u>	1.2
C23	<u>Sociology</u>	2.0
C24	<u>Anthropology and Development Studies</u>	0.8
C25	<u>Education</u>	2.1
C26	<u>Sport and Exercise Sciences, Leisure and Tourism</u>	0.6
Panel D		
D27	<u>Area Studies</u>	0.2
D28	<u>Modern Languages and Linguistics</u>	1.0
D29	<u>English Language and Literature</u>	0.6
D30	<u>History</u>	1.1
D31	<u>Classics</u>	0.4
D32	<u>Philosophy</u>	0.2
D33	<u>Theology and Religious Studies</u>	0.2
D34	<u>Art and Design: History, Practice and Theory</u>	0.6
D35	<u>Music, Drama, Dance and Performing Arts</u>	0.5
D36	<u>Communication, Cultural and Media Studies, Library and Information Management</u>	0.7

6. What is the main source of funding for your current position?

N=7887

<u>Charity funded</u>	17.2
<u>EU/EC funded</u>	13.2
<u>Institution funded</u>	21.0
<u>Research Council funded</u>	25.6
<u>UK industry funded</u>	3.3
<u>UK government (including devolved administrations) funded</u>	11.3
<u>Other</u>	8.3

If Research Council funded, which Council is your main source of funding? N=1911

<u>AHRC</u>	5.3
<u>BBSRC</u>	15.4
<u>EPSRC</u>	37.7
<u>ESRC</u>	8.2
<u>MRC</u>	18.1
<u>NERC</u>	11.7
<u>STFC</u>	3.7

## Section 2 – Recognition and Value

This is your opportunity to consider how you, as a researcher, feel valued and recognised as a member of your institution's staff.

7. To what extent do you agree that your institution both recognises and values the contributions that you make to...

	Agree strongly	Agree	Disagree	Disagree strongly	Not applicable	N
a) Grant/funding applications?	12.7	37.7	14.8	8.0	26.8	8115
b) Knowledge transfer and commercialisation activities?	7.6	36.4	14.5	6.4	35.1	8075
c) Managing budgets/resources?	4.7	29.7	19.9	8.8	36.8	8071
d) Peer reviewing?	6.0	33.0	25.8	11.0	24.2	8048
e) Publications?	27.2	49.5	12.1	5.1	6.2	8091
f) Public engagement with research?	9.8	43.0	17.7	6.4	23.1	8057
g) Supervising/managing staff?	5.4	29.2	19.7	8.0	37.6	8090
h) Supervising research students?	8.9	35.8	19.0	8.8	27.5	8102
i) Teaching and lecturing?	7.6	29.9	16.4	8.2	37.9	8098

8. 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
Access to training and development opportunities?	33.1	52.3 [54]	6.8	3.0	3.8	1.0	8116
Opportunities to attend conferences and external meetings?	29.3 [33]	49.3	11.9 [9]	4.5	3.7	1.3	8090
Opportunities to participate in decision-making processes (e.g. committees)?	9.8 [11]	36.4 [40]	26.6 [21]	12.8 [11]	7.3 [13]	7.0 [4]	8097
Opportunities for promotion and progression?	8.0 [9]	29.0 [31]	27.5 [24]	19.9 [16]	9.4 [14]	6.1	8106
Requests for flexible working?	28.5 [34]	41.1	5.1[4]	2.8 [2]	9.4 [12]	13.1 [7]	8053
Terms and conditions of employment (excluding any fixed-term nature of contract)?	14.5 [19]	45.5 [54]	11.2	6.6	11.2 [8]	11.0 [3]	8045
Visibility on websites and staff directories?	21.9 [24]	52.9	11.6	5.9	5.6	2.0	8095

9. To what extent do you agree that...

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) You are integrated into your department's research community?	26.3	51.3	17.5	4.8	8117
b) You are integrated into your institution's research community?	14.0	48.0 [46]	31.9 [35]	6.2	8101
c) You are integrated into your wider disciplinary community?	17.4	51.4	26.7 [29]	4.5	8064

10. 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=8035

Yes	59.5 [55]
No	40.5 [45]

If NO, is this because... N=3340

You are on probation?	10.9
You've only recently been appointed?	29.7 [24]
You haven't been invited to do so?	37.8 [44]
You haven't arranged this?	6.0 [8]
You are not eligible?	5.2
Other	10.4

11. If you have participated in your institution's staff review/appraisal scheme in the last two years how would you rate this scheme's usefulness...

	Very useful	Useful	Not very useful	Not at all useful	Not applicable	N
Overall?	8.2	35.9	21.6	9.2	25.0	6484
For you to highlight issues?	8.7	39.9	17.9	7.6	25.8	6444
In helping you focus on your career aspirations and how these are met by your current role?	9.4	32.5	21.9	10.8	25.5	6441
In identifying your strengths and achievements?	9.0	36.5	21.0	8.5	25.1	6444
In leading to training or other continuing professional development opportunities?	6.8	29.2	26.8	11.2	26.0	6428
In leading to changes in work practices?	3.1	19.7	31.5	16.4	29.2	6435
In reviewing your personal progress?	9.5	40.8	16.4	8.1	25.2	6430

12. How would you rate your knowledge and understanding of the following UK 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
<u>Athena Swan Charter for Women in Science</u>	23.6	31.2	45.2	8104
<u>Concordat for Engaging the Public with Research</u>	7.9	22.8	69.4	8080
<u>Concordat to Support the Career Development of Researchers</u>	13.9 [22]	23.3 [35]	62.9 [43]	8087
<u>Concordat to Support Research Integrity</u>	5.0	17.5	77.5	8050
<u>European 'HR Excellence in Research' Award recognition</u>	6.0	26.4	67.6	8049
<u>RCUK 'Pathways to Impact'</u>	17.9	28.9	53.1	8014
<u>Research Excellence Framework (REF)</u>	61.2 [54]	23.8 [35]	15.0 [11]	8097
<u>Vitae</u>	19.7	24.8 [31]	55.4 [50]	8078
<u>Vitae Researcher Development Framework (RDF)</u>	14.8	22.3	62.9	8053

13. Please provide any additional comments on how you are recognised and valued by your institution, what more it could do to recognise and value your contributions, and your knowledge about research staff initiatives

## Section 3 - Recruitment and Selection

If you have been in your current post for two years or less, we'd like to know how you were recruited to it. If you have held this post for more than two years, skip straight to Section 4

14. How did you find out about your current post? (Select all that apply) N=6812

By word of mouth	24.1 [28]
I am the grant/fellowship holder	6.7 [8]
I saw it advertised/listed	44.0
I was named on the grant	7.7 [11]
I was redeployed (e.g. to avoid redundancy)	3.0
I don't know/can't remember	0.6
My previous contract was extended	8.4 [12]
Other (Please specify)	5.5

15. During the application process, which of the following were you provided with?

	Yes	No	I don't remember	N
A written description summary of what the job entailed (job description)	86.0 [72]	9.5	4.5	6001
Details of the qualifications required of the post-holder	87.3 [68]	8.4	4.4	5977
Details of the specialist research skills required of the post-holder	83.2 [62]	11.0	5.7	5960
Details of the transferable/personal/management skills required of the post-holder	67.3 [39]	17.4	15.3	5961

16. 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
Institutional-wide induction programmes	6.3	27.3	21.3 [17]	5.6	28.7 [33]	10.8 [14]	6059
Departmental/Faculty/Unit induction programme	8.3	31.9 [28]	15.7 [14]	4.2	35.1 [41]	4.8	6041
The local induction to your current role	18.0 [15]	41.2 [39]	10.4	2.6	25.5 [28]	2.3 [4]	6038

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



## Section 4 – Support and Career Development

In this section we invite you to think about your professional development. By 'continuing professional development' (CPD) we mean an on-going and reflective approach to improving one's knowledge, attitudes and behaviours through a variety of formal and informal activities, such as developing your research techniques, presentational skills, project management skills, leadership capabilities, maintaining a record of professional development, etc.

18. To what extent do you agree that ...

	Agree strongly	Agree	Disagree	Disagree strongly	N
You are encouraged to engage in personal and career development?	24.3	49.3 [54]	21.1	5.2	8109
You take ownership of your career development?	34.9	51.9	11.1	2.1	8076
You have a clear career development plan?	14.2	38.3	39.1	8.4	8042
You maintain a formal record of your continuing professional development activities?	14.0 [17]	41.0 [53]	37.6 [27]	7.3 [4]	8022
You use the Vitae Researcher Development Framework to support your continuing professional development activity	1.6	7.4	45.8	45.2	8024

19. In which areas have you undertaken, or would you like to undertake, training and other continuing professional development activities?

	Undertaken	Not undertaken but I would like to	This is of no interest to me currently	N
Career management	19.9	54.0	26.1	7977
Collaboration and teamworking	24.6	41.2	34.3	7946
Communication and dissemination	31.9	41.3	26.8	7936
Equality and diversity	26.6	21.2	52.2	7922
Ethical research conduct	24.8	29.9	45.3	7910
Knowledge exchange	14.3	51.3	34.4	7876
Leadership and management	19.3 [16]	53.2 [51]	27.5 [33]	7972
Personal effectiveness	21.0	47.6 [43]	31.4 [37]	7925
Public engagement	18.6	51.1	30.3	7957
Research impact	17.5	62.9	19.6	7937
Research skills and techniques	41.5	39.2	19.3 [21]	7954
Supervision of doctoral/masters students	28.8	48.8	22.4	7987
Teaching or lecturing	31.9	45.3	22.8	7987

20. 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 training and other continuing professional development activities? N= 7923

	2013	2011
None	20.6	21%
Less than 1 day	7.8	
1 day	9.9	1-2 days: 26%
2 days	14.1	
3 days	12.0	3-5 days: 26%
4 days	7.1	
5 days	8.7	
6 days	3.3	6-10 days: 13%
7 days	4.1	
8 days	1.9	
9 days	.5	
10 days	3.1	
More than 10 days	7.0	7%

21. In what other areas would you like to undertake training or other continuing professional development activity?

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
<b>23. Working with others</b>				
Collaborate with colleagues outside the UK	66.2 [61]	29.7 [33]	4.1[6]	8093
Collaborate in research with external organisations	65.2	29.8	5.0	8071
Mentor and support other researchers	46.8	40.0	13.2	8048
Supervise undergraduate or postgraduate research projects	58.0	31.3	10.7	8047
Undertake an internship/placement outside higher education research	9.2	42.4	48.4	8044
Work as part of a cross-disciplinary team	59.3 [54]	33.8 [37]	6.9 [9]	8075
<b>24. Research and financial management</b>				
Manage a budget	37.9 [35]	42.9 [38]	19.2 [27]	8052
Plan and manage a project	51.2 [54]	41.5 [40]	7.2	8051
Write a grant/funding proposal	54.4 [49]	38.1 [41]	7.5 [10]	8057
<b>25. Engagement and impact</b>				
Engage with policymakers and end users	29.9	45.1	25.0	8037
Knowledge exchange	32.2	50.5 [45]	17.3 [22]	7992
Participate in public engagement activities	39.5	40.0 [37]	20.5 [23]	8025
Teach or lecture	51.5	31.3	17.3	8038
<b>26. Communication and dissemination</b>				
Present work at a conference orally	80.6	15.7	3.7	8088
Write up research for publication as first author	78.7	19.1	2.2	8071

27. 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.

22. In which area do you aspire and expect to work in the long term? (Select one option in each column)

	Aspire	Expect
Career in higher education – primarily research and teaching	42.9	35.4
Career in higher education – primarily research	33.4	25.2
Career in higher education – primarily teaching	1.3	1.7
Other role in higher education	1.3	1.9
Research career outside higher education	8.5	10.1
Self-employment/running your own business	2.8	1.6
Teaching career outside HE	0.2	0.6
Other occupations	4.0	7.2
Don't know	5.4	16.3
N	8072	8028

## Section 5 – Equality and Diversity

In this section we are interested in your views on equality of opportunity and whether equality and diversity is promoted in all aspects of the recruitment and management of research staff.

28. Please indicate your level of agreement or disagreement with the following statements

	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	N
I believe my institution is committed to equality and diversity.	37.1 [33]	48.7 [52]	6.6 [5]	2.4	5.2 [8]	8117
I am satisfied with my work-life balance	19.0	50.8	20.5	8.2	1.5	8093

29. I think that staff at my institution are treated fairly, regardless of personal characteristics such as age, ethnicity, disability or gender, in relation to...

	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	N
Access to training and development	37.9 [32]	49.0 [53]	3.4	1.1	8.5 [10]	8101
Career progression / promotion	24.9	38.9 [43]	16.5 [12]	5.5 [4]	14.2 [16]	8088
Day to day treatment at work	32.9 [31]	50.8 [54]	7.0 [6]	2.3	7.1	8081
Participation in decision making	24.5	41.6 [44]	14.9 [12]	4.8 [3]	14.2 [18]	8067
Recruitment and selection	26.3 [31]	44.7 [51]	9.8 [5]	4.2 [2]	15.0 [12]	8085
Reward	22.9	38.5 [43]	13.6 [11]	4.9 [3]	20.1	8069

30. Overall, I think that staff at my institution are treated fairly irrespective of...

	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	N
Age	32.0 [28]	47.2 [50]	7.7 [9]	2.1	10.0	7989
Disability	33.1 [30]	43.6 [48]	2.2	0.7	19.4 [18]	7985
Ethnicity	36.0 [33]	46.7 [52]	3.3	1.2	12.8 [11]	8066
Gender	32.5 [31]	44.3 [49]	10.4 [9]	3.2 [2]	9.6	8055
Gender identity	30.8 [29]	39.9 [44]	2.2	0.9	26.2	8048
Nationality	35.1 [32]	47.7 [52]	4.7	1.6	11.0	8047
Pregnancy and maternity	28.7 [26]	40.2 [43]	6.8	2.7	21.7	8053
Religion/belief	34.4 [32]	45.1 [49]	1.3	0.6	18.6	8054
Sexual orientation	32.5 [30]	42.5 [46]	0.9	0.4	22.5	7925

31. Have you ever felt that you have been discriminated against in your post? N=7635

Yes	9.7
No	90.3

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

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

[Institution-specific questions here]

## Section 6 – About You

33. What is your age? N=8026

25 and under	2.5
26 – 30	22.6
31 – 35	31.3
36 - 40	16.9
41 – 45	10.2
46 - 50	7.3
51 – 55	4.8
56 – 60	2.8
61 or older	1.6

34. What is your gender? N=7920

Female	54.3
Male	45.7

35. Are you a UK/British national? N=7767

Yes	63.3 [67]
No	36.7 [33]

(a) If you are a UK/British national, how would you classify your ethnic group and cultural background? N=4475

<b>White</b>	
White British	43.1 [61.5]
White English	8.5 [12.8]
White Scottish	4.8 [8.0]
White Welsh	2.1
White Irish	2.9
Any other White background	20.6 [3.5]

<b>Mixed</b>	
Mixed White and Black Caribbean	0.1
Mixed White and Black African	0.2
Mixed White and Asian	0.8
Any other Mixed background	1.0

<b>Asian</b>	
Asian, Asian British, Asian English, Asian Scottish or Asian Welsh Indian	2.5 [1.2]
Asian, Asian British, Asian English, Asian Scottish or Asian Welsh Pakistani	0.6
Asian, Asian British, Asian English, Asian Scottish or Asian Welsh Bangladeshi	0.3
Any other Asian background	1.6 [0.3]

<b>Black</b>	
Black, Black British, Black English, Black Scottish, or Black Welsh Caribbean	0.3
Black, Black British, Black English, Black Scottish, or Black Welsh African	0.5
Any other Black background	0.2

Chinese, Chinese British, Chinese English, Chinese Scottish, Chinese Welsh	4.1 [1.9]
Rather not say	3.1
Other	3.0

(b) If no, are you a national of another EU member state? N=2706

Yes	60.0 [58]
No	40.0 [42]

36. Do you consider yourself disabled? N= 8033

Yes	2.2
No	95.7
Prefer not to answer	2.1

## Appendix 2: Progress against CROS 2009 recommendations

### 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

### Participation

CROS 2009	CROS 2011	CROS 2013
51 HEIs (28 in Russell Group or 1994 Group) 5908 responses 21% response rate	46 HEIs (23 in Russell Group or 1994 Group) 5585 responses 25% response rate	68 HEIs (27 in Russell Group or 1994 Group) 8216 responses 26% response rate

### Recruitment and selection

CROS 2009 recommendations	Progress recorded in CROS 2011	Progress recorded in CROS 2013
Institutions should ensure that all recruitment policies are open and transparent, for example all vacancies should be promoted and advertised externally.	✓ Since 2009 there was 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.	✓ Further decrease in proportion hearing by word of mouth.  (Question tightened in 2013 to ask about applications 'only within last 2 years', so not directly comparable with previous results.)
Ensure that departments and principal investigators are aware of and follow institutional recruitment policies and procedures, including providing job descriptions to all post holders.	✓✓✓ There were significant increases in the proportion receiving job descriptions (over 70%) and other supporting information relating to their new post.	✓✓ Strong increases again for all types of information.  (Question tightened in 2013 to ask about applications 'only within last 2 years', so not directly comparable with previous results.)
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 reported that their application interviews were with panels including wider representatives, and a lower proportion report not having an interview at all. There was no evidence for progress on applicants having more opportunities to meet other staff informally during interview process.	(Not questioned in CROS 2013.)
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 were 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.	✓ Provision of inductions increased  (Question tightened in 2013 to ask about applications 'only within last 2 years', so not directly comparable with previous results.)  Provision of other information not questioned in 2013.

## Recognition and value

CROS 2009 recommendations	Progress recorded in CROS 2011	Progress recorded in CROS 2013
All eligible researchers should undertake regular reviews and appraisal; most research staff report these to be useful.	<p>✓✓ More (55%) reported that they had undertaken appraisal than had not; there had 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 warranted further (local) exploration.</p>	<p>✓ Modest increase in appraisal to just under 60%.</p> <p>✗ Usefulness broadly similar; slight decrease in perceived usefulness in relation to changing work practices.</p> <p>✓ Decrease in proportion of apparently eligible researchers that are not invited to appraisal (15%).</p>
Appraisal processes should also address work practices and problem-solving.	<p>✓✓ There was an increase in the proportion (to around three quarters) whose appraisal addressed work practices.</p> <p>(Questions in CROS 2011 did not specifically include the issue of problem-solving.)</p>	<p>✗ Slight drop in the proportion whose appraisal addressed work practices (now 71%).</p>
Institutions should consider how they can recognise more fully the contribution of researchers, beyond their research activities.	<p>✓ CROS 2011 demonstrated modest increases in the proportion that perceived recognition and value from their institution for some specific contributions, but for other contributions this was unchanged (although for none had the proportion decreased).</p>	<p>✗ Slight decreases in relation to management and supervision-related activities.</p> <p>✓ Recognition slightly higher for knowledge exchange and public engagement activities, and for core research activity.</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 perceived integration within their departmental and institutional research communities had increased significantly, and there were also increases within less engaged groups.</p>	<p>✓ Levels of perceived integration similar or slightly higher than in 2011.</p>

## Support and career development

CROS 2009 recommendations	Progress recorded in CROS 2011	Progress recorded in CROS 2013
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 had been a significant increase in the proportion of respondents reporting that they felt encouraged to engage in career development (including within many sub-populations).</p> <p>The majority of researchers had consulted or would consult their managers for support. Few consulted with staff developers and career advisors.</p>	<p>✗ Overall, no increase in proportions feeling encouraged to engage in career development.</p> <p>(Consulting with others not questioned in CROS 2013.)</p>
Institutions should increase and promote the provision of information and advice about careers, career progression and application processes within/outside academia.	✓ Substantial proportions of respondents continued to claim interest in receiving information and advice, although the proportions were somewhat lower in 2011 for some areas.	(Not questioned in CROS 2013.)
Careers services should explore ways to improve their engagement with researchers.	The revised CROS 2011 questions on the level of interaction with careers services had been generalised to emphasise researchers' engagement with different sources of support, rather than to measure the past extent of interaction specifically with HE careers services.	(Not questioned in CROS 2013.)
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.	✓✓ CROS 2011 recorded a significant increase in the proportion who has undertaken career management training.	✗ No change to proportion undertaking 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.	<p>✓ Changes in the CROS question set prevented direct comparison, but the proportions reporting they had undertaken and/or would like to participate in transferable skills training remained significant and consistent.</p> <p>Few were investing in as much as ten days of continuing professional development (CPD) per year.</p> <p>New recommendation on use of Vitae Researcher Development Framework to underpin CPD.</p>	<p>✗ Proportions roughly maintained</p> <p>(Minor adjustments to questions in 2013 limit comparability)</p> <p>✓ Slight increase in take-up and demand for leadership and management training.</p> <p>✗ No change to the total extent of CPD undertaken</p> <p>(Minor adjustment to question in 2013.)</p> <p>✓✓ New benchmark: 37% heard of Vitae Researcher Development Framework; 9% had used it.</p>
Institutions should explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen career aspirations.	✗ The proportion reporting that they had undertaken external placements or secondments remained low, although the proportion expressing interest was substantial and growing.	<p>✓ The proportion undertaking a placement outside higher education rose from 5% to 9%, with 42% being interested in doing so.</p> <p>(Question tightened in 2013)</p>

## Researchers' responsibilities

CROS 2009 recommendations	Progress recorded in CROS 2011	Progress recorded in CROS 2013
Managers and staff developers should stress that researchers need pro-actively to take responsibility for their own development and career planning, including being informed about their employment and progression and how to participate in a range of wider activities.	✓ A small but significant increase was recorded in the proportion of respondents with a career plan. Although there was no evidence for further increases in the levels of understanding of relevant policies and procedures, these were at high levels for many issues.	✗ No change to proportion with a career development plan. 87% claim to take ownership of their career development. (New question in 2013.)
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 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.	(Not questioned in CROS 2013.)
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.  New recommendation to consider utilising the Vitae Researcher Development Framework professional development planner as a mechanism to record their professional development.	✗ Levels mostly maintained, slight drop in recognition for some management activities. (New and revised questions in 2013.) 9% using Vitae Researcher Development Framework (New question in 2013.)



## Equality and diversity

CROS 2009 recommendations	Progress recorded in CROS 2011	Progress recorded in CROS 2013
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 investigated perceived inequalities in relation to other staff generally, rather than just lecturers, therefore not directly comparable. Proportion perceiving unfair treatment compared with other staff was lower than that reported in relation to lecturers in 2009.	<p>✗ Some slight increases in proportion perceiving unfairness of treatment in comparison with other staff in relation to certain issues, particularly amongst female and older respondents.</p> <p>✗ Proportion perceiving unfairness of treatment compared with other types of staff slightly higher.</p>
Ensure the institution's commitment to valuing researchers is communicated effectively to researchers and their managers and implemented in practice.	✓✓✓ Respondents reported increased perceptions of recognition and value for many of their contributions (and no decreases).	<p>✓ Increased perceptions for publications; slightly higher for securing funding, knowledge exchange and public engagement activities.</p> <p>✗ Slightly lower perceptions for management-related activities.</p> <p>(Minor adjustments to questions in 2013 limit comparability.)</p>
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 continued to report perceptions of discrimination against them personally.	<p>✗ Consistent proportion reporting personal experience of discrimination.</p> <p>✗ Some slight increases in proportion of some sub-populations perceiving inequality of treatment in relation to several issues: progression, participation in decision-making, reward.</p>

## Implementation and review

CROS 2009 recommendations	Progress recorded in CROS 2011	Progress recorded in CROS 2013
Institutions are encouraged to compare their own response data with the aggregate responses presented here, taking into account local conditions and cohorts.	✓✓ There was strong anecdotal evidence that institutions valued the aggregate reports to compare their own results and identify priorities for action. CROS workshops were well-attended. Almost 2000 copies of CROS 2009 report had been distributed.	✓ Increasing proportion of HEIs gaining HR Excellence in Research Award utilising CROS data in gap analysis and progress reporting.
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. <a href="http://www.vitae.ac.uk/CMS/files/upload/Vitae-The-visibility-of-researcher-development-in-UK-higher-education-institutions-strategies-2011.pdf">www.vitae.ac.uk/CMS/files/upload/Vitae-The-visibility-of-researcher-development-in-UK-higher-education-institutions-strategies-2011.pdf</a> 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 gaining HR Excellence in Research Award publishing their action plans and progress reviews, which include local CROS data.
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.	Standard benchmarking groups available for institutions to compare their 2013 results.
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. (46 institutions in 2011) 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.	✓✓ 84 institutions have participated since 2009. 68 institutions participated in CROS 2013. CROS/PIRLS Steering Group circulated advice on increasing response rates.
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. Key CROS data included in the Concordat measures of progress. CROS results used in the 2012 three-year review of progress. <a href="http://www.vitae.ac.uk/concordat">www.vitae.ac.uk/concordat</a>	✓ CROS 2013 aggregate results published and widely circulated. Concordat measures of progress will be updated and reported to the Concordat Strategy Group, November 2013.
The CROS Steering Group should commission further analysis of sub-populations of the aggregate results, eg by broad subject areas, employment status.	✓✓✓ CROS 2009 analysis by broad discipline group published 2010 <a href="http://www.vitae.ac.uk/CMS/files/upload/CROS%202009%20by%20discipline.pdf">www.vitae.ac.uk/CMS/files/upload/CROS%202009%20by%20discipline.pdf</a>	Potential to analyse CROS 2013 by funding source, including by Research Council.
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 Vitae conference, September 2009 and a special interest session on CROS 2009 by discipline at the 2010 conference. The CROS/PIRLS Steering Group, Vitae North-West Hub and Yorkshire and Northern Ireland Hub jointly ran a national CROS practice sharing event in November 2010.	✓ Two workshops ran at the 2013 Vitae conference on analysis of CROS results and practice sharing activities.

## Appendix 3: 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 researcher staff, principal investigators and research leaders employed in higher education.

### 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 on-going 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

Rosie Beales, RCUK

Lisa Burman, University of Coventry

Frank Chambers, University of Gloucestershire

Ian Forristal, Queen Mary, University of London

Richard Freeman, Institute of Education

Mike Gulliver, Institute for Learning and Research Technology, University of Bristol

Rob Hardwick, University of Leicester

Laura Hodsdon, University of Oxford

Sarabajaya Kumar, London School of Economics

Lucy Lee, University of Sheffield

Alison Leggett, Bristol University

Alison McCleery, Edinburgh Napier University

Janet Metcalfe, (Chair), Vitae

Sean Moley, University of Southampton

Christos Petichakis, University of Liverpool

Anna Price, King's College London

Bonnie Steves, Glasgow Caledonian University

Meg Tait, University of Cambridge

Meera Warriar, University of Leicester

Jane Wellens, University of Nottingham

Vicky Willet, University of Leeds

Sara Williams, Cardiff 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 2013 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](http://www.cros.ac.uk)

Vitae champions the professional and career development of postgraduate researchers and research staff in higher education institutions and research institutes. We work in partnership with higher education institutions, research organisations, funders, and national organisations to meet society's need for high-level skills and innovation and produce world-class researchers.

Vitae is a network based organisation, consisting of a central team based in Cambridge, regional Hubs throughout the UK and international networks. Vitae works with higher education institutions (HEIs) to embed professional and career development in the research environment.

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

Vitae is supported by Research Councils UK (RCUK), UK HE funding bodies and managed by CRAC: The Career Development Organisation and delivered in partnership with regional Hub host universities.

Further information on our activities with HEIs, researchers and employers may be found on its website, [www.vitae.ac.uk](http://www.vitae.ac.uk).