

# Early career social science researchers: experiences and support needs

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# Early career social science researchers: experiences and support needs

A short research study of the experiences of early career researchers: support for postdoctoral researchers from research organisations, funding bodies and career services

Full report

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## **Executive Summary**

An Executive Summary of this report and Methodology Appendix were published in August 2016 by the Economic and Social Research Council at:  
<http://www.esrc.ac.uk/skills-and-careers/postgraduate-careers/early-career-researchers/>

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# 1. Introduction

The Economic and Social Research Council (ESRC) has an interest in developing a deeper understanding of the experiences and issues faced by early career researchers (ECRs) in the social sciences. In 2015, the Research Council made a commitment to review its overall support for early career researchers to ensure that it adds most value and complements provision by other funders and research organisations. This study, commissioned in 2015, was intended to inform the development of the ESRC's support for early career researchers during the following five years. An Executive Summary of this full report and Methodology Appendix were published in August 2016. Drawing on this study and other evidence, the Research Council is introducing a series of measures that seek to provide a more integrated support system, responsive to the needs of different disciplines and recognising different career trajectories. These measures acknowledged that there are three distinct ECR stages: doctoral; immediately post-doctorate; and the transition to an independent researcher.

The measures to be introduced from 2016/17 included:

- A review of careers advice and support provided through the Doctoral Training Partnerships and Centres for Doctoral Training to ensure they are providing realistic careers support and advice for careers both within and beyond academia.
- Funding for approximately 50 one-year full-time (or two years part-time) Postdoctoral Fellowships each year through the Doctoral Training Partnerships, available to ESRC and non-ESRC funded doctoral graduates who are within one year of completing their PhD in order to give them the opportunity to consolidate their PhD through developing publications, their networks, and their research and professional skills.
- Commissioning an international comparative review of the nature of the PhD in the social sciences to establish the extent to which the UK PhD is providing effective preparation for research careers within and beyond academia.
- A New Investigator strand of the Research Grants scheme replacing the Future Research Leaders scheme aimed at supporting those looking to make the transition to an independent researcher through managing their first major research project with grants ranging from £100,000 to £300,000 full Economic Cost (fEC).
- Encouraging the participation of ECRs within other ESRC funding schemes, for example, as co-investigators on research projects.
- Requiring ESRC grant holders to set out how they will support postdoctoral researchers' continuing professional development and including this as part of the assessment process.

A similar study to the one reported here was published in 2014 by the British Academy, jointly funded by the Arts and Humanities Research Council (AHRC), to look at support for arts and humanities researchers after the

award of their doctorates (Renfrew and Green, 2014) and the Research Council sought to extend this research to the social sciences. Subsequently, Vitae also aimed to develop a better understanding of Arts and Humanities doctoral researchers' and early career researchers' (ECRs) professional development within a challenging labour market (Vitae, 2017).

### **Aim and objectives of the research**

The aim of this research study was to gain an insight into the diversity of roles, opportunities and support available for early career researchers (ECRs) in the social sciences whether they currently work in the higher education sector or not.

The main objectives of the research were to:

- assess the range of experiences and circumstances of ECRs in the social sciences after completing their PhD;
- identify and assess the type and quality of support provided for ECRs, from a variety of sources, and identify good practice;
- identify the common career trajectories for ECRs in the social sciences and develop an understanding of any disparities between their career aims, expectations and reality; and
- review funding opportunities available to ECRs in the social sciences.

The remainder of this introductory section describes the research design and methodology for the study. A brief review of evidence from other similar studies follows. The findings from this study are divided into the succeeding four sections of this report: on the experiences and career trajectories of early career social scientists; on the type and quality of support provided for them; on the funding opportunities available and their impact; and on suggestions for improvement. These findings are then discussed and conclusions drawn. Finally, a number of recommendations are made for the ESRC, other higher education sector bodies and universities.

### **Research design**

The study consisted of:

- an online survey of over 1,000 early career researchers
- 35 follow-up Skype and telephone interviews with survey respondents
- nine in-person and Skype interviews with experts

This mixed approach also drew on evidence from previous research to inform the study design and triangulate the results.

### **Sampling**

One of the challenges of the study was that the data on the total population of early career social scientists is incomplete and their profile can only be guessed. According to data from the Higher Education Statistics Agency

(HESA), between 2006/07 and 2013/14, a total of 45,000 individuals gained a doctorate degree in a range of social science subjects from UK higher education institutions. This figure does not include those who might have graduated from non-UK HEIs during that period. Also, it does not tell us what the graduates have done since their doctorate was awarded. The Longitudinal survey of the Destination of Leavers from Higher Education in 2008 and 2010 reported that more than 60% of social science doctoral graduate respondents in UK employment were working in HE (Vitae 2013, HESA 2013, 2015a). Furthermore, it was not possible to estimate the proportion of the total population of doctoral graduates in the UK working inside and outside HE that would describe themselves as early career researchers in the social sciences, and therefore would have been potential respondents. ***For these reasons, the study participants cannot be assumed to be representative of the total national population of early career social scientists, and so all findings reported here are necessarily qualified.***

### **Online survey questionnaire**

An online survey was used to ascertain the experiences, aspirations, opportunities and support currently available, used and found useful by early career researchers in the social sciences. The Bristol Online Surveys (BOS) service was used to develop, deploy and analyse the survey via the internet. The survey was devised in consultation with the ESRC and in the light of the previous AHRC survey (Renfrew and Green, 2014). The questionnaire included extensive multiple choice and free text questions (see Annex 1). A definition of early career researchers was not prescribed and respondents were free to define themselves as such when deciding whether to respond to the survey. The survey was open for 12 weeks in total (between 24 August and 11 November 2015).

The online survey aimed to ascertain the following information from respondents:

- their motivations for doctoral study;
- their current employment and future aspirations;
- the availability of career advice and guidance – and what they used;
- their education and personal information.

### ***Promotion of the survey***

Contact details were identified for professional and learned societies (e.g. British Psychological Society for psychology), including those with international memberships (e.g. the British Educational Research Association) and Graduate/Doctoral/Faculty Schools. The ESRC supplied the 21 ESRC DTC contact details. We also identified contact details for government, local authorities, health services, etc, that were likely employers of recent social science PhD graduates. The ESRC Bloomsbury DTC Cluster Leaders – and UCL pathway leaders – were consulted for advice and suggestions on non-HE employers. These organisations were then contacted and asked to

promote the survey using their email and other social media channels (e.g. Twitter, Facebook and LinkedIn). Vitae was asked to promote the survey through its Twitter feed and regular emails to researcher developers. We also contacted professional bodies to see if they could help us to access those not currently working in the HE sector. We identified relevant Twitter accounts, LinkedIn and Facebook groups (and other social networking groups) used by social science PhDs to enable periodic promotion during the survey window. We contacted the groups and tweeted to promote the survey and noted those retweeting, in order to identify further possible social networking possibilities. The ESRC provided pro-vice chancellors in universities and their DTCs with information that could be forwarded to early career social scientists in their institutions. The ESRC also promoted the survey to their investments too. The survey had a short URL link (<http://bit.ly/ESRC-survey>) to facilitate easy distribution. The survey was also publicised by the *Times Higher Education* magazine (Grove, 2015). In the short time available, contacting those currently working outside academia and/or outside the UK proved more difficult than communicating with those working in UK HE.

We considered offering incentives to encourage participation in the survey, but decided against doing so since this was a survey about professional issues that would be of direct and immediate interest to most potential respondents. We expected the opportunity to influence national and institutional policy and practice would be more of an incentive than any kind of 'prize' we could offer. Indeed, the offer of a prize might have served to trivialise the survey and discourage potential participants from responding.

### ***Survey responses and basic demographics***

When the survey closed, there were 1,053 responses. Five of these had no data and so were excluded, giving 1,048 usable responses. Of these 1,048 respondents, 31% were male, 68% were female and 1% did not respond to this question. This suggests an over-representation of women compared to men among the respondents when compared with the HE sector as a whole: slightly over 52% of those obtaining a doctorate in the social sciences in 2014/15 were female (HESA, 2016) and this had been fairly consistent in the previous three years. With regard to nationality, 61% of respondents identified themselves as British Nationals, 24% as Other European and 15% as Non-European. The majority of respondents (78%) attended a state school. Of those that indicated their ethnicity (954), the overwhelming majority were white with 90 identifying as black or minority ethnic. Just 10 respondents identified themselves as black, 14 as Chinese or Japanese, 26 as mixed, 32 as Asian, five as Latin American and three as Arab. Just 5% of our respondents declared they had a disability (compared with 7.2% of postgraduate research students in 2013/14 (ECU, 2015)) and one third (33%) stated they had caring responsibilities. Respondents ranged in age from 23 to 71. The mean age was 36 and the modal age was 35 with the majority of respondents (69%) in their thirties. Further characteristics are detailed below in Table 1.



**Table 1. Characteristics of Survey Respondents (N = 1048)**

<b>Characteristic</b>	<b>Count</b>
<i>Age (years)</i>	
Under 30	104
30-35	469
36-40	210
41-49	112
50+	57
<i>Time since doctoral completion (years)</i>	
0-1	248
2-3	256
4-5	237
6 or more	230
<i>PhD funding source</i>	
ESRC	321
Institutional – full scholarship	259
Self-funded	182
Other	162
Institutional – part-time work required	129
Other Research Council	119
Non-UK Government	66
Charity	48
Corporate	9
<i>PhD institution</i>	
Oxbridge	78
Other Russell Group	467
Other UK	282
International	156
<i>Student nationality</i>	
UK-British national	610
Other EU	236
Non-EU	154
<i>Doctoral subject</i>	
Sociology	163
Psychology	161
Geography	121
Politics and International Relations	99
Education	90
Business and management studies	72
Economics	70
Anthropology	51
Social policy & administration	38
Languages & Linguistics	35
History	28
Law	27

Town and country planning	14
Media studies	12
Social work	9
Accountancy	4

Our sample can be compared with Renfrew & Green's (2014) results, CROS 2015 and HESA data from 2014/15 (HESA, 2015b) (see Table 2).

**Table 2. Early career researcher respondent characteristics**

	This survey	Renfrew & Green (2014)	CROS 2015	HESA 2014/15 (all academic staff)
Female	68%	63%	54%	45%
Male	31%	37%	46%	55%
<b>Ethnic group (UK)</b>				
White (all)	91%	93%	92%	86%
BAME (all)	9%	7%	8%	14%
<b>Nationality</b>				
UK	61%	65%	60%	72%
Other EU	24%	21%	26%	16%
Rest of World	15%	14%	15%	12%
Disability	5%	3%	2.5%	4%

To enable comparison with Renfrew & Green's (2014) results, we divided respondents first into whether they were working in the HE sector or not. There were 934 working in HE, with 83 not in the HE sector and 21 who indicated they were unemployed (with 10 not giving a response). We then divided those working in HE into those on fixed-term contracts (454) and those on open-ended/permanent contracts (480). Compared to Renfrew & Green (2014), our respondents working in HE were more likely to be on permanent contracts with  $\chi^2(1) = 74.99, p < .001$  (Table 3).

**Table 3. Comparison of ECRs in Arts & Humanities and Social Sciences on fixed term and permanent contracts**

	Arts & Humanities	Social Sciences
ECRs on fixed term contracts	544 (69.2%)	454 (48.6%)
ECRs on permanent contracts	241 (30.7%)	480 (51.4%)
Total	785	934

It is also important to note that, given that the majority of respondents had been awarded their doctorate two or more years previously, very few of them were likely to have had experience of doing their PhD in a Doctoral Training Centre (DTC). Indeed, DTCs were not mentioned by any survey respondents in any of their responses to open-ended survey questions. However, there was a belief among the experts interviewed that the DTCs could potentially play an important role in developing, training and supporting early career researchers. This study offers a baseline against which some aspects of the impact of the DTCs could be evaluated in the future.

### **Qualitative follow-up to the survey**

Once the interim findings from the online survey had been reported, the ESRC indicated that it would like the UCL Institute of Education to undertake a qualitative follow-up to the survey, involving interviews with a selection of the survey respondents and representatives of relevant research and other organisations and individuals with expertise in the support and progression of early career researchers in the social sciences. This was necessary to provide more detailed and nuanced accounts of researchers' career trajectories before, during and since their doctoral studies that could not be obtained via a generic questionnaire. It also allowed an exploration with the research organisations' representatives of enhanced and new forms of support suggested by the interviews with early career researchers and via the online survey. This was essential in order to provide a full and rounded set of findings, analysis and discussion of these, together with conclusions and substantive recommendations.

### ***Interviews with a selection of the survey respondents***

The sample of survey respondents was selected from those responding to the survey who had indicated their interest in participating in follow-up interviews via telephone or Skype. By the close of the survey, 484 (46%) of the respondents had indicated their interest in participating in interviews. The sample was constructed to include a balanced selection of specific variables, namely type of institution for doctoral study, whether currently employed in HE or by a non-academic employer, subject, age, gender, ethnicity, source of funding, and time since completion of doctoral study. We aimed for a minimum of 35 interviews of survey respondents.

From those respondents that had indicated their interest in being interviewed as part of the second phase of the study, 70 were selected in order to cover the range of possible respondents, but not to be representative of the (unknown) characteristics of the total population. The interview sample included a balanced selection by age, ethnicity, nationality, time since completion of their PhD, type of institution and source of funding for their doctoral studies, discipline, and whether they were currently working in academia or outside. From these, 36 interviews were conducted and one was discarded on the grounds of limited value in answering the research questions. There were 18 female and 17 male interviewees; 14 had studied at Russell Group universities, nine were from other pre-1992 universities, 11

from post-1992 universities and one had studied abroad. Eight were working outside academia: six female and two male. Other characteristics are detailed in Table 4.

**Table 4. Subject characteristics of Interviewees (N = 35)**

<b>Characteristic</b>	<b>Count</b>
<i>Age (years)</i>	
Under 30	4
30-35	16
36-40	8
41-49	3
50+	4
<i>Time since doctoral completion (years)</i>	
0-2	15
3-5	11
6-8	6
8 or more	3
<i>PhD funding source</i>	
ESRC only	8
ESRC <i>et al</i>	6
Institutional	8
Self	3
Other	10
<i>Ethnicity</i>	
Black	2
Chinese	1
Arab	1
White	31
<i>Student nationality</i>	
UK-British national	25
Other EU	4
Non-EU	6
<i>Doctoral subject</i>	
Geography	7
Psychology	4
Business & Management	4
Sociology	4
Politics	4
History etc	3
International relations	2
Economics	2
Linguistics	1
Anthropology	1
Education	1
Law	1
Communications & culture	1

The following types of information were sought from the social science early career researchers in a semi-structured interview:

- Institution(s) of study
- Current place of employment
- ESRC-specific issues
- Ongoing support
- Studying and working abroad

The interview schedule for survey respondents is included as Annex 2.

### ***Interviews with experts***

In addition to these, nine interviews were undertaken with a sample of representatives of relevant research and other organisations and individuals with expertise in the support and progression of early career researchers in the social sciences. Organisations included Vitae, the major universities for social science ECRs and in receipt of ESRC funding and a representative of a post-1992 university. These interviews followed the completion of the majority of the interviews with survey respondents so that the main issues raised by respondents could be explored with these representatives and experts.

The interviewees were:

- Dr Elizabeth Adams, Research Development Manager, University of Glasgow
- Professor David Bogle, Chair of the League of European Research Universities Doctoral Studies Community and Pro-Provost of the Doctoral School, University College London
- Dr Ross English, University Lead on Doctoral Student Development, King's College London
- Dr Callum Leckie, Careers Consultant and joint Deputy Head of the Careers Service at University College London, part of The Careers Group, University of London
- Professor Ingrid Lunt, former Director of Graduate Studies, Department of Education, University of Oxford, and former Director of ESRC Oxford Doctoral Training Centre
- Professor Lynn McAlpine, Professor of Higher Education Development and Head of Research, Oxford Learning Institute, University of Oxford
- Dr Janet Metcalfe, Head and Chair of Vitae
- Professor Andrew Tolmie, Director of ESRC Bloomsbury Doctoral Training Centre and ESRC UCL DTC, UCL Institute of Education
- Professor Peter Wells, Assistant Dean for Research and Knowledge Transfer, Faculty of Development and Society, Sheffield Hallam University.

The following types of information were sought from the social science ECRs interviewed:

- Feedback on the key findings from the survey
- The needs and existing sources of support for social science ECRs from institutions, research funders and other HE organisations
- Possible solutions / ideas for improving support that have come from the survey and interviews with respondents
- Particular issues for women
- How the situation will develop in the next five years

The topic guide for interviews with representatives from research organisations and other experts is included as Annex 3.

### **Statistical analysis**

Quantitative and some qualitative data from the survey were subjected to a number of bivariate analyses, including by:

- type of doctoral institution (Oxbridge, other Russell Group, other UK HEI, and International)
- receipt of external funding and source (ESRC, other research council, institution, and other – including self-funded) during and after doctoral study
- type of support available (from doctoral institution during doctorate, from doctoral institution after doctorate, from current main employer)
- career aspirations (before doctoral study, during doctoral study, after doctoral study, and at the time of the survey)
- years since completing the doctorate (0-1, 2-3, 4-5, 6 and above)
- secured first paid post (before submitting, less than 3 months, 3-6 months, 6-12 months, 1-2 years, over 2 years, not yet secured a paid post)
- mode of current employment (fixed-term, permanent)
- nature of current role (primarily research, teaching and research, primarily teaching)
- gender

## 2. Evidence from other similar studies

### Overview of relevant studies

Over the past 25 years there have been a number of studies exploring doctoral careers in the UK, America and Europe (Rudd, 1990; Morrison, *et al.*, 2011 and Inzelt *et al.*, 2014), some of which have specifically included those at the early stages of their post-doctoral careers. While most studies have included all disciplines (Diamond *et al.*, 2014; Hooley *et al.*, 2009; Vitae 2013) some have focused specifically on social science graduates, although in relatively small numbers (Nuernberg & Thompson, 2011; Purcell *et al.*, 2006 and Rudd & Nerad, 2015). Several have been funded by the ESRC. It has also been an area of interest for the Organisation for Economic Co-operation and Development (OECD) (Auriol, 2010 and Auriol *et al.*, 2013) and the European Social Fund (ESF) (Nogueira *et al.*, 2015).

The majority of studies are based on (online) surveys to doctoral graduates and are often supplemented with follow-up interviews, some of which include employers and/or lecturers. The OECD studies used large-scale secondary data sets provided by member countries. Very few studies are small-scale and solely qualitative in nature (see for example Golouvushkina and Milligan, 2012). It is therefore appropriate that this study took the path of a comprehensive online survey, supplemented by interviews with some of the respondents to the survey.

### Reaching doctoral graduates

The majority of studies report that reaching their target population was challenging. Studies with the largest number of responses came from those that either included all disciplines or had a defined target group that could be easily accessed. The first study into doctoral social science graduates was carried out 25 years ago by Rudd (1990) to assess the value of holding a doctorate. In his ESRC-funded project, Rudd looked at graduates who had gained their first degree between 1972 and 1977. To do this, he divided them into two groups: those who went on to gain a doctorate and those who did not. Despite having (postal) addresses from participating universities, Rudd reported that contacting the target population was a major issue. However, he did manage to elicit 2,931 responses from a population of 6,808; a return rate of 43%. More recently Diamond *et al.*, (2014) achieved 1,839 responses to their all discipline survey, despite not having direct access to their target population by using what they describe as a 'flexible' approach to sampling.

### A question of terminology

Another issue for studies in this area is that of terminology when considering exactly who is a doctoral graduate at the 'early' stages of their career development and who is not. 'Early career social scientist', 'early career researcher' and, in some cases, 'young' (Schiermeier, 1999) researchers are

all terms seemingly used interchangeably without consistency and, in some cases, without explanation. For some researchers, the population includes those who had acquired their doctorate up to 10 years before; for others the timescale was substantially shorter. Other criteria may or may not have been included, for example, the type of roles the participants had held since their award. For Bridlea *et al* (2013: 24), an early career researcher is someone who is '*undertaking a doctorate or those working in academia up to 10 years after PhD completion but without holding a permanent position*'. Morrison *et al* (2011) took five years after graduation to be their starting point (investigating cohorts from 1995 to 1999), but then allowed the inclusion of 'years out' which meant their social science doctoral graduates fell somewhere between six and 10 years. Some researchers, such as Mercer (2013) and Nuernberg and Thompson (2011), did not define who an 'early' career doctorate or a 'recently graduated social scientist' might be, while others (i.e. Savage, 2013) have allowed doctoral participants to self-define.

The literature, therefore, shows that the timeframe for being considered an 'early' career doctorate can be anything from five to 10 years. For this study, the research team were asked to target all those who had graduated in the social science disciplines (Accountancy, Anthropology, Business and Management Studies, Economics, Education, Geography, History, Law, Linguistics, Media Studies, Politics and International Relations, Psychology, Sociology, Social Policy and Administration, Social Work, and Town and Country planning) up to eight years before. However, given the lack of a coherent or consistent definition in this area, it was agreed it should be left to respondents to decide whether or not they are an early career social researcher or scientist and to justify why they categorised themselves this way.

### **Areas explored and findings**

While studies into doctoral graduates have had a wide focus, they fall into four broad categories: employability, destinations, their doctoral experiences and personal motivation and development. Some studies covered all of these, while others tended to concentrate on one specific area.

On employability, studies have looked at the training and skills that doctorate students gained during their studies, how useful these proved to be in the workplace and how employable postgraduate candidates were at the end of their studies. Improvements that could be made to the doctoral experience to enhance employability and the type of contracts they are able to secure – along with how long that might take – have also been explored. Evidence shows those holding doctorates in the area of physical and biomedical sciences and engineering appear to be more likely to gain secure employment upon graduation while those in the social sciences are more likely to be on part-time and fixed-term contracts (Auriol, 2010). Morrison *et al* (2011) found that their respondents, (of which there were some 3,000), did not feel their doctoral programmes had trained them sufficiently in the skills needed for both academic and non-academic jobs. Purcell *et al* (2006) also found gaps in



doctoral training with time management, interpersonal and team working skills underdeveloped.

Many studies focused on employment destinations, on which sectors doctoral graduates were employed in, why, and how these were viewed by graduates themselves, i.e. whether it was their desired destination. Vitae has released a number of reports looking at this area during the last six years, although the samples on which these were based did not include representative proportions of social scientists. In 2009 they published their 'What do researchers do?' series, looking first at the career profiles of doctoral graduates (Haynes *et al.*, 2009) and then at doctoral graduates' destinations by subject (Hooley *et al.*, 2009). These were followed by a report on the early career progression of doctoral graduates published in 2013 (Mellors-Bourne *et al.*, 2013). Focusing on social science doctoral graduates, specifically, Rudd (1990) found that those who went on to gain a doctorate were likely to be in receipt of low pay '*...largely because so many of them are employed in university teaching and related jobs where salaries have been held down by government policy*' (Rudd 1990: 231). While a PhD was seen as useful, the study raised serious doubts as to the necessity of a doctorate to carry out this type of work. Rudd further commented that:

*'...elsewhere there are very few jobs where a PhD is considered necessary, though in a wide range of jobs some training in research, possibly at first-degree level, is regarded as relevant, or even highly relevant, to the job.'* (Rudd 1990: 321)

16 years later, in 2006, Purcell *et al* reported similar findings from their ESRC funded survey of 1,726 social science respondents. Those in non-academic work reported '*...higher salaries, better job security and more opportunity to develop new skills than did their academic counterparts*', (page 1). They concluded that non-academic jobs were not seen as a second best option for doctoral graduates. Further, Purcell *et al* found that '*...whilst over 70% of non-academic employees were on permanent or open-ended contracts, less than half of the academic counterparts were in the same position...*' (Purcell *et al.*, 2006) The ESF report, aimed at all disciplines and which had 499 respondents, also found that the '*...vast majority of respondents work as researcher (88%), mainly in public sector institutions (82%)*' (Nogueira *et al.*, 2015: 8).

Studies have also looked at issues such as personal motivation, the influence of family, age and gender differences. The recently published ESF career tracking of doctorate holders report (Nogueira *et al.*, 2015:8) noted that older doctorates were more likely to have permanent contracts than younger graduates. They found just 27% of those under the age of 40 had permanent full-time contracts compared to 73% of those over 40 years of age. On gender, Morrison *et al* (2011:23) found men and women to be at a similar level in the labour market initially, but '*...observed...over time gender inequities emerge*' with the women in the study commenting that ultimately it was a trade-off between their family and their career.

Motivations for initially studying for a doctorate has been an area often explored by surveys. Morrison *et al* (2011) found the main motivations were an interest in the subject, that a doctorate was necessary for the respondent to gain their desired position at work. Purcell *et al* (2005) found a range of reasons for studying at doctoral level. For social science graduates, the top three reasons were: 'to develop more specialist skills/knowledge'; 'to develop a broader range of skills/knowledge'; 'I thought it would improve my employment prospects'. Enhancing employment opportunity is therefore a major driver for doctoral study.

### **3. The experiences and career trajectories of early career social scientists**

#### **Education: First degree**

Respondents had studied a variety of subjects at undergraduate level with the four most popular being Psychology (16%), Geography (9%), Sociology (9%) and Politics and International Relations (8%). Respondents studied their first degree at a range of institutions with just 8% studying at the universities of Oxford or Cambridge, 29% at other Russell Group universities, 23% at other UK Higher Education Institutions (HEIs), 32% studying abroad and 8% not giving an institution. Of those 922 respondents who stated that they had a UK first degree classification, 56% achieved a first class honours, 38% a 2.1 and 5% were awarded a 2.2. There were no thirds, but 1% were awarded a pass degree.

#### **Education: Doctoral study**

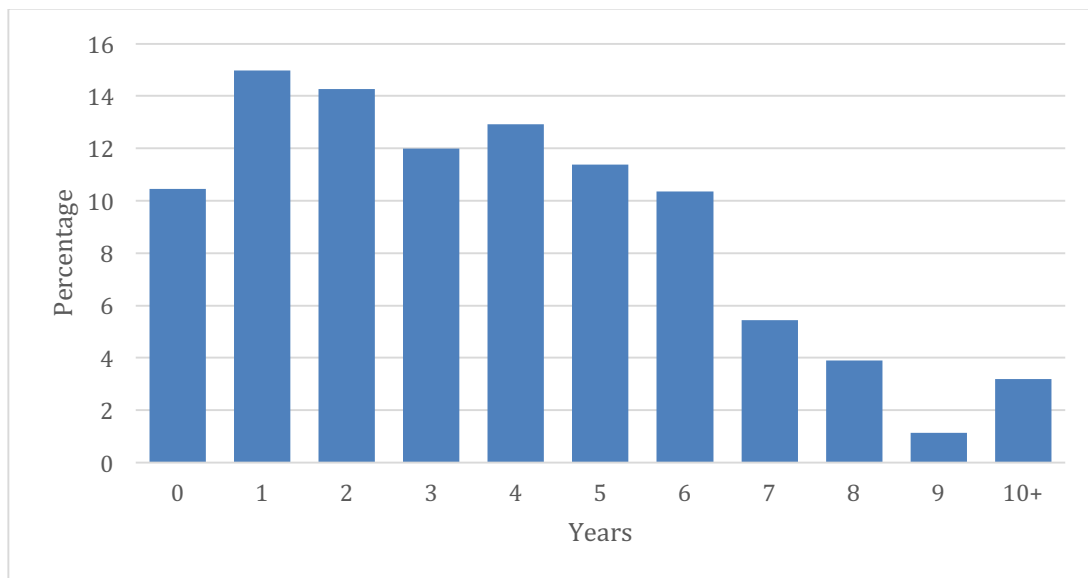
All but eight respondents had a research doctorate (rather than a professional, or practice-based, doctorate). The majority of respondents (83%) studied for their doctorate full time with 9% studying part-time and 8% studying a mix of full and part-time. The two main sources of funding for doctorates were the ESRC (25%) and the institution (30%). The third most common source was self-funding (14%) with other research councils accounting for 9%. Other sources were non-UK government (5%), charity (4%) and corporate (1%) and just one respondent was funded by the British Academy. 'Other' was selected by 12%.

A wide range of subjects was studied at doctoral level with 'Other' (16%) proving to be the most frequently selected option, although many of these were combinations of subjects. A broadly similar pattern was seen to that of the first subject study with the most popular remaining Psychology (16%), but level now with Sociology (16%) and followed by Geography (12%), Politics (10%) and Education (9%). Education is a more popular subject to study at doctoral level than at undergraduate level.

As with first degrees, respondents studied at a wide range of institutions. Just 7% studied at the universities of Oxford and Cambridge with just under half of respondents (44%) studying at other Russell Group universities, 27% at other UK higher education institutions – with 20% from pre-1992 universities and 7% from post-1992 universities, 15% studied outside the UK and 7% did not supply their doctoral institution. The largest group (42%) of respondents took four years to complete their doctoral studies with 14% taking three years and 28% taking five years. Only twelve respondents that answered this question took 10 years or longer to complete.

The majority of respondents (84%) did not suspend their studies at any point. However, the feasibility of suspending studies was mentioned, “There was a time when this was suggested to me due to ill health, but it was not feasible as it would have also suspended my funding and I had no other means of support.” A variety of reasons were given by those who did suspend their studies, but the three main reasons were maternity leave (23%), ill health (30%) and needing to do paid work (20%). Also, of note was that 11% of those suspending did so because of an internship.

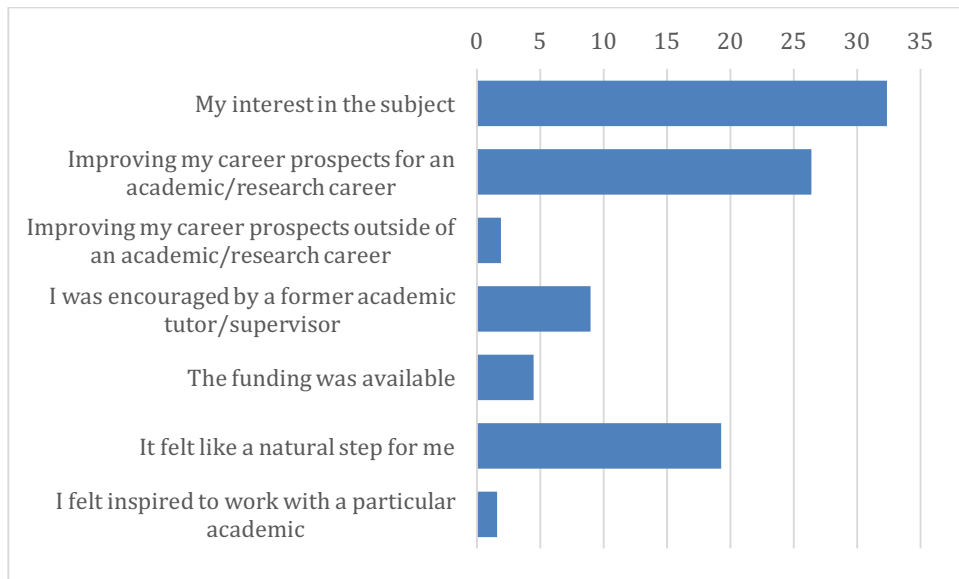
The number of years since completion of a doctorate for respondents was determined (Figure 1). Combining ‘up to and including one year since completion’, ‘two to three years’, ‘four to five years’, and ‘six years and above’ gives remarkably similar-sized groups (25.4%, 26.3%, 24.3% and 24.0% respectively) so these groupings were chosen in later analyses.



**Figure 1. Time since completion of doctorate**

### **Doctoral study: Motivations**

The four most popular reasons for studying for a doctorate were: an interest in the subject (32%), improving career prospects specifically for an academic/research career (26%), because it felt like a natural step (21%) and 9% stated they were encouraged to study for a doctorate by a former academic tutor or supervisor.



**Figure 2. Main motivation for doctoral study (%)**

Related to these motivations, the career aspiration most cited by respondents before study, during doctoral study, immediately after completion of study and at the time of the survey, was to take up a career in higher education, primarily in the area of research and teaching. This was followed by a research-only career in higher education. However, having a research career outside of higher education was the third most popular response and a higher education teaching-only career was fourth most popular. The career aspirations at the time of the survey (n.b. respondents could choose more than one option) were:

- to take up a career in higher education, primarily in the area of research and teaching (55.7%)
- a research-only career in higher education (35.0%)
- a research career outside of higher education (18.6%)
- a higher education teaching-only career (6.0%)

### **Desired outcome and time to achievement**

The evidence from the survey and the follow-up interviews would suggest that, for most respondents, undertaking doctoral study broadly/ultimately resulted in their desired outcome: a role within academia. The majority of respondents (81%) worked in the higher education sector immediately following completion of their doctorate, with nearly half in primarily research roles.

However, follow-up interviews with survey respondents revealed that while several interviewees did report being where they had originally intended to be, or on the way to realising their desired career goal, in most cases getting there had taken longer than they had expected, the journey had been extremely stressful, frustrating and not as straightforward as they had envisaged. Interviews revealed that there is no single common career trajectory for doctoral graduates. Almost all felt that they had taken a unique,

unconventional and non-traditional path and interviewees reported a wide range of experiences on completing their studies from going directly into a permanent academic post to multiple short-term contracts. Many had constructed and, in some cases, were still managing what might be termed a 'patchwork' or portfolio career. Aspirations and reality were therefore not always easily aligned as the following extracts illustrate:

*Probably not no...I think the environment was slightly different then when I started my PhD in 2006-07, I probably expected to be working as a lecturer in a different university to where I am now. (602 / M / Post-1992)*

*I would say completely different because I thought that I would stay in academia. I think I also started fairly optimistically. I think I am much more... (how can I say?) disillusioned now. Because I had hoped to stay in academia, have maybe a lecturer post by now...I wasn't really properly briefed before doing my PhD that actually doing a PhD means a lot of insecurity and a lot of instability for a very long time. (319 / F / Pre-1992)*

Even those that have been successful relatively quickly had not found success easily, as this highly successful and talented female interviewee less than three years from completion of her PhD commented:

*...I would have like[d] to have had a lot less stress in my life. I think it has gone surprisingly well but the one thing that has struck me...I took an unconventional route, if you had asked me in my third year of PhD where would I ideally like to be, I would like to be holding some fantastically prestigious research fellowship for five years and then cruise into a tenure track post somewhere but that has not been my experience. My experience has been a lot of graft, a lot of hard work, a lot of alternative unusual things that I didn't expect like I got head hunted by a university instead of having to apply for a job myself and I got a research grant instead of a medium term fellowship... I have done well but it has been surprising in terms of how I actually got there. (622 / F)*

For one interviewee, her aspiration of becoming a university lecturer had taken a very long time to be realised and far longer than anticipated:

*I feel like I have been a long way to get to my aspirations for the past ten years. I feel like I am now within sight of it. I feel it is now realistic to get from where I am to where I want to be, but that has not been the case, literally until August, that has not been the case. It has felt impossible and unrealistic and actually laughably absurd to try and get to where I want to be. Now it feels manageable but a challenge...I am now in a position as a lecturer instead of a researcher, I have always wanted to be university lecturer that was what I always wanted to do and I have spent so long not doing that that I doubted whether or not I was trying to do the right thing. (558 / F / Pre-1992)*

This following quotation highlights the direct impact delays in reaching a desired professional role within academia had on the choices some interviewees had made in their personal life, for example delaying having a family or buying a home:

*Having to take a post doc instead of being competitive for a tenure track faculty position, that is two years longer than I thought I would be and having to get a second post doc because after my first one I wasn't competitive for faculty positions so that delayed me even longer...then of course these fixed term contracts and having to spend half of my year looking for jobs, applying for jobs, that has delayed us buying a house, it is delayed because we don't know where we are going to be living as much as whether we could get a mortgage. It has delayed us having a family, we have been married two years and it took longer to get married than we thought and we still haven't started our family because I don't know whether I will have a job to take maternity leave from so absolutely everything has been delayed waiting for my career to settle down. (123 / F / Pre-R)*

Those interviewees that had succeeded quickly with little difficulty were in the minority (and mainly men) and viewed themselves as being 'lucky', often by virtue of being in the right place at the right time:

*I have got a lot more publications than I thought I would have. I would have hoped to have progressed probably a little bit more in the exact area of my PhD, in terms of that piece of research...overall, I think I'm much further on than I expected to be and I think I am more recognised as a researcher than I would have expected to be... (671 / M / Pre-1992)*

*I would think I'm probably ahead of the curve on where I think I would have been. I only say that because I think getting in and getting a career development fellowship with the MRC has given me exposure to leading my own research a lot earlier than otherwise I may have expected. (421 / M / Post-1992)*

*My route post PhD has been thankfully quite fortunately permanently employed. I was a post-doc for two years and I was very very fortunate that the post-doc was actually for seven years so I have never really been on a very short contract. I was then fortunate and got my lectureship in the University of Liverpool and I'm now moving on. So I am acutely aware that my experience has been very different perhaps to other early career researchers in that I haven't had any point of unemployment. (647 / F / Pre-1992)*

There was a feeling among some interviewees – even those that had themselves been successful – that currently there is an oversupply of doctoral graduates in the workplace; that too many doctorates are being awarded compared to the number of academic roles available:

*I do think the ratio of people that are training for a doctorate to the number of jobs that are available is getting worse by the year so there are many more people who come out with a PhD expecting a job than will actually get a job that they aspire towards or that they thought that they would get. And I see a lot of my friends come out and they spend a long time applying for a job, especially tenure track jobs, and end up having to take something that is substandard or something that they wouldn't really want to do. They take on research assistant posts and they are massively over qualified for it or they have to go and travel overseas to try and find a job, simply because there are so many more people coming out with PhDs than there are jobs....that pressure of the bottleneck that we all feel when you first come out that you don't realise that your odds of securing a good position are really very small indeed. (622 / F)*

This trend of over-supply of doctoral graduates in the foreseeable future was also commented upon by the expert interviewees.

*...if the numbers go on increasing (and that's a big if) then the employment situation is going to get worse because I don't see that employment prospects are going to increase. I mean, there are demographic factors, people such as myself and all the people who are my sort of age have been or are in the process of or will be retiring but not necessarily creating huge vacancies. So I think there may still be a problem of over-supply of graduates and not enough academic posts. (Expert 2)*

Interviewees would like to have a more accurate picture of academic employment prospects earlier on in their studies, if not at the start:

*...a more realistic perspective about how hard it is to get a job in academia, you know it is a hard slog and people have to submit 200 job applications before you even get a look in, so I don't think that is really acknowledged at the university, especially for those with families and things like that you have to be so mobile and again it is not something that is acknowledged, just a more honest discussion about it would probably alleviate a lot of stress for PhD students I would imagine. (17 / F)*

However, not everyone found it difficult to carve out a career in academia. There were some interviewees that had not intended upon starting their doctorate to take up a career in academia but found themselves remaining once they had completed their studies, as this interviewee explained:

*I wanted to go and work in a consultancy firm or, because my research is in quite a topical area there are a lot of jobs you can do..., I always thought I would return back into the kind of policy, public health area... and I thought that until about a year ago, a year and a half ago and then you know I have been working on*



*research projects that I really enjoyed and I still think maybe this is the right thing for me at the moment. But at the moment I work in a field which is quite easy to flip between the two. (24 / F)*

## **Pathways to desired employment outcomes**

Over three-quarters of survey respondents (76%) secured their first paid appointment within three months of submitting their thesis, with 35% being appointed before they had completed their studies.

Interviews confirmed that some, had indeed, found an academic job immediately on, or even before, doctoral completion:

*I submitted my thesis in September 2013 and the same week that I submitted my thesis I started a teaching fellowship at the same department where I had conducted the work... and also I had been teaching there throughout my doctoral studies. (391 / M).*

This illustrates not only the importance of being in the right place at the right time but also of having the relevant training and experience before completing a doctorate, i.e. teaching experience.

Most of those that had found positions relatively quickly and easily recognised that they were fortunate and that this was not necessarily the case for many. For most interviewees their first employment was rarely the job they were ultimately aiming for (as illustrated by some of the quotations in the previous section); often it was a teaching position or a time-limited post-doctorate fellowship rather than a substantive post. In some cases, interviewees had left academia for a short time immediately after doctoral completion, returning later.

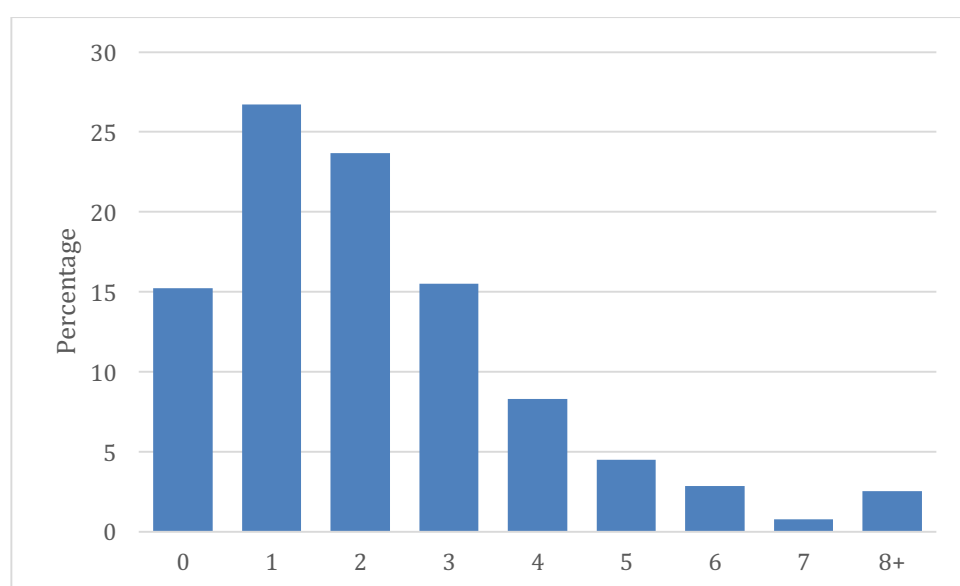
Reasons for leaving initially varied, but included personal issues and not being able to secure an academic post. Others had left for paid employment, but retained some contact with academia:

*When I finished my doctorate I was looking for an academic job and I was unsuccessful in doing that so I took on a temporary contract in the public sector and I have since then been extended within that temporary contract in the public sector but I work in the evenings as a part-time lecturer at one of the Glasgow universities and I got that through someone who supervised my PhD in the early stages. (92 / F)*

Some had found an academic role, but only after several temporary part-time contracts in either research or teaching. This had taken longer for some than others and some were still seeking that permanent position many years after graduating (confirming the finding that a third of the survey respondents were still seeking permanent employment six years after graduation). For example, at one extreme, a female interviewee from a prestigious Russell group

university, who had graduated 11 years previously and taken two career breaks for maternity leave, had held at least three contracts. The first was a junior research fellowship, the second a post doctorate position. At the time of the interview, she was working as a part-time lecturer to cover maternity leave. She commented, '*...it has been a chequered career, I started out with lots of positive promise and praise and found it very, very hard to keep that standard.*' (558 / F)

At the time of the survey, just 2% of respondents had yet to secure a paid position, including only three respondents who had completed their doctoral studies more than five years previously. However, the survey appeared to indicate that the majority were taking at least four years to attain a permanent or open-ended academic contract and, even after six years, nearly a third had not achieved this.



**Figure 3. Number of fixed-term contracts since completion of doctorate**

Half of all survey respondents had had one or two fixed-term contracts since completing their doctorate. The overwhelming majority (85%) working in higher education held just one contract at the time of responding, with 15% holding two or more contracts concurrently. A diverse range of reasons were given for holding multiple concurrent contracts, but the most common was to earn more money as one part-time contract was not enough to pay the bills. Other reasons included improving their CV, not being able to secure a full-time post, family or childcare commitments and simply that they enjoyed the work. Some interviewees said they would like greater acknowledgment by the sector that contract work after doctoral submission is highly likely and that these are frequently short-term in nature. The majority of survey respondents (83%) were also working full-time, with 78% of them doing so within two years of gaining their doctorate. The percentage on a full-time contract was highest for doctoral graduates from Oxbridge and international institutions at 93% and 92% respectively, with Russell Group and Other UK HE institutions at 79% and 78% respectively. Half (50%) of all respondents had permanent or open-ended contracts with a further 36% employed on a fixed-term contract of 12

months or more. However, 9% had contracts that were fixed-term of less than 12 months duration. Just 20% of respondents had been in their current main employment for less than six months, with 11% for 6-12 months, 25% for 1-2 years, 27% for 2-4 years and 17% for four years or more. Compared with the respondents to a similar survey of arts and humanities ECRs (Renfrew & Green, 2014), the social sciences respondents working in HE were more likely to be on permanent contracts at the time of the survey (51.4% social sciences compared with 30.7% arts and humanities).

The current position of those working in HE (89% of survey respondents) was that the majority (52%) had both research and teaching responsibilities, and the majority of these (79%) were on permanent contracts. The next largest group was the 41% who had primarily research roles, of which 82% were on fixed-term contracts. In addition, 7% had primarily teaching roles and 14% held two or more contracts at the time of the survey (including different roles at the same institution).

Survey respondents gave a variety of different job titles with 43% indicating that their role was research focused (i.e. research associate/assistant, research fellow, researcher). Another 45% had job titles of the form lecturer, senior lecturer or assistant/associate professor. Just 3% had explicit reference to teacher/teaching in their job title and 11% were in other categories. With regard to non-teaching and non-administrative tasks, on average respondents estimated they spent 10 hours per week on writing up research, six hours per week reading academic articles, five hours per week on data collection, four hours per week on writing bids/applying for research funding and three hours per week on knowledge exchange (e.g. consultancy; collaboration with business, public and voluntary sectors, etc).

The survey respondents (in their open text responses) and interviewees described a wide diversity of experiences and career trajectories for doctoral graduates, such that it was not possible to discern common career trajectories. Many felt they had taken a unique and 'non-traditional' route to where they are now, indicating there is an enduring perception of a traditional, linear path into academia, whether or not this has ever been the experience of the majority of ECRs in the social sciences.

### **Most teach at some stage**

The vast majority of respondents (87%) reported teaching at higher education level during their doctoral studies. Two thirds were expected to teach as part of their current role. Those who were expected to teach estimated on average that it took up just under half (44%) of their contracted time. It was striking that a quarter of those respondents were unable to answer this question and referred to a lack of clarity about expectations/requirements with some expected to teach without any official recognition of this.

## Career breaks

Just under a quarter (22%) of respondents stated they had taken a career break at some point after completing their doctorate. For the majority of these respondents (81%) the duration of their career break was one year or less with just 4% of respondents taking a career break of three years or longer. The largest group (41%) had taken their most recent career break within the previous year, with just 14% taking it four years or more previously. The most frequently cited reason for taking a career break was to take maternity leave (63%). This is perhaps unsurprising, especially given the predominance of female respondents to the survey. Some of the respondents who took maternity leave reported being treated unfairly (i.e. their contract was not renewed following maternity leave), e.g. “Maternity leave of 4 months. No way of taking more than this (due to financial constraints), and I was back working from home after 2 weeks 'break' as I needed publications/funding applications submitted to ensure I still had a job, as was on part time/temp research contract.” Just under 10% reported taking a career break due to a lack of employment, family responsibilities or illness. For those reporting illness, the majority referred to burnout after PhD study or mental exhaustion.

Some expressed scepticism at taking a career break, e.g. “I would have loved to have taken a break to care for ill parents or to have had a child, but was worried that doing so would ruin my chances of ever 'getting in' again”, “I don't think you can take a career break as an early career researcher without severe consequences. I will not have children until I for one have a stable permanent job!”, “I wish I did but who would have the courage or the money to do that. We work ourselves dead.” and “I should have taken a career break due to illness, but felt my position was too insecure to do so am still working through to the detriment of my own long-term health”.

Interviewees that had taken career breaks (all three were women on maternity leave) also felt it had impacted on their career progression. One interviewee reported that her university tried to make her redundant while she was on maternity leave and that there was no support at all for her on her return. One interviewee had a particular issue when applying for research funding following maternity leave commenting:

*I wrote to the ESRC, I sent them an email and said I thought it was very contradictory with all the rhetoric about long life learning and supporting women etc. etc., that there wasn't anything to help the re-insertion of women, because one of the reasons why I stopped working so hard and lost a bit the track was because I had children in the middle. So something that could help the re-insertion of people due to different circumstances, not just because having had children but maybe you had a break and you wanted to explore another path like going to government or something like that...the re-insertion schemes let's say. (269 / F)*

## Employment outside HE

Just 9% of respondents were working outside of higher education and their motivation for doing so varied. However, most referred to problems with getting employment in higher education, especially the difficulty of finding a post, low salaries and short-term contracts.

This issue was further explored during the interviews, particularly with the eight interviewees that were currently working outside of academia. The oversupply of PhD graduates compared to the number of available posts was again mentioned and appeared to be a key issue here:

*I know how difficult it is for young academics to stay inside academia because there just aren't enough jobs, enough positions, enough funding to go around for the number of recent PhDs that there are. And I also know that academia is becoming more and more competitive and more and more exploitative. There are so many more PhDs than there are positions. (319 / F)*

This quotation comes from an interviewee who has now left academia, after a post-doctoral period in South Africa. She currently works abroad freelance for a charity in an area related to her doctoral study. However, she remains hopeful that sometime in the future she may re-enter academia and spends time networking and looking for possible research funding and writing journal articles. Much of this is made possible because she retained affiliation with her post-doctoral South African higher education institution.

The perceived over-supply of doctoral graduates was supported by the expert interviewees who felt that numbers were only going to increase in the next five years, with one stating: *'I think there may still be a problem of over-supply of graduates and not enough academic posts'* (Expert 2). It would therefore appear that the struggle to secure a permanent academic position will only get more difficult and more doctoral graduates may find themselves having to seek employment outside the sector.

Some interviewees had left academia permanently, usually because of the lack of permanent positions:

*I did look at academic jobs but I wanted – there weren't many kind of long term employment opportunities there so I actually ended up going to the – because my research was in the development sector. I found a job as a monitoring and evaluation officer. (823 / F)*

Although a minority, there were a small number of interviewees that had never intended to enter an academic career; most of these were embarking on a second career.

## Employment outside the UK

[Q25] Just over a quarter (26%) of the respondents had worked outside the UK in a variety of countries, almost all of them in higher education. However, post-doctoral international mobility appeared to be low with just 5% of respondents having worked abroad since completing their doctorate and, of those, 63% having been employed in a higher education institution overseas.

Interviews confirmed this with very few interviewees having worked or studied abroad; those that had were mostly men. Furthermore, most were not planning to do so in the foreseeable future. The main stumbling blocks here were connected to family and relationships and applied to both men and women.

While many liked the idea of working abroad, both male and female interviewees felt it was impractical at the present time due to their family circumstances: ‘...these days it is family and my wife’s job and things like that’ (602 / M). For some, the stability and potential progression opportunities of their partners’ jobs were a key consideration.

*My husband has always been more well-paid than I am so in order for us as a family to move we would need to sacrifice his salary. He has been told very explicitly by his employer that he is on a partner track. If he doesn’t leave they will offer him excellent professional development opportunities and they will grow him and that is exactly what has happened. So he is now a partner in the company that he works in and he is doing very well thank you. My career has offered me no such perks and I am dis-incentivised to jeopardise his career for the unpalatable and high risk opportunity of working overseas. (558 / F)*

Therefore, levels of mobility among ECRs are low and seem destined to remain so.

At the time of the interviews, 10 (29%) of the male interviewees were employed on permanent contracts while for women this number was just five (14%). Women interviewees were more likely to be on fixed-term contracts: both less than 12 months (two women only) and more than 12 months (six women and three men). Women interviewees were also more likely to be on part-time temporary or hourly paid contracts than men (five women only). More of the male interviewees had finished their doctoral studies within the previous two years – nine men (26%) compared with seven women (20%) – and had secured permanent contracts than the female interviewees. Although the numbers in each category were small, due to the size of the sample, the interview data do support the findings from the survey that men are more likely to secure permanent, full-time contracts sooner than women.

## Definitions of an early career researcher

There were varying views from interviewees on who or what constitutes an early career researcher. The definition was not necessarily time-bound. Interviewees were more likely to link being an early career researcher to their experience and confidence and the appointment to a permanent academic position than they were to the number of years since they had graduated. In line with the survey responses, female interviewees were more likely to consider themselves early career researchers for longer, with eight female interviewees (23%) having completed their doctoral studies more than six years previously, compared with just one of the male interviewees.

Some of the key considerations for remaining an early career researcher are highlighted in the quotations below and included: not having been a principal investigator on an (externally) funded research project, not having a full-time permanent contract, and the time elapsed since doctoral graduation.

*...it is difficult, I think it depends especially when you are going for different funding you are considered an early career researcher within so many years of your PhD, I also think that I probably consider myself early career because I haven't yet been successful in getting funding, so there are still things that I need to work on. And so I think I am at the cusp, I will probably transit to mid-career with whatever is next, but I think that those are why I consider myself early career. (446 / F / 8 years since award of doctorate)*

*I am just about four years since my PhD but I still do not see myself in a kind of stable, secure position. I have a permanent contract, I have had it for the last twelve months but it is only part-time and I am still looking for a full-time contract. In my job I am still on academic probation and I am applying for new positions now because I want to change my workplace because I want to change the nature of my contract. I am still in the process of learning and that is recognised in the nature of my contract...in the provision I receive from my academic mentors from my department and also the allowance in my workload and so on. (445 / M / 4 years since award of doctorate)*

*Because of the period of time from finishing my PhD until now. Secondly I suppose in terms of what my relative achievements have been. So I think if I was now a full-time lecturer and had been for several years I might not consider myself quite so early career, but I don't know because I'm not in that situation. (648 / F / 3 years since award of doctorate)*

*Probably because I haven't been doing this for very long, as part of my position here I am still expected/encouraged to be research active so to attend conferences, to try and publish from my PhD research and to put in applications for research funding as well.*

*And I am only two years out of my PhD so I guess that is why I would consider myself early career. (391 / M / 2 years since award of doctorate)*

Many felt that they would remain 'early career' while they were eligible to apply for early career research funding, as defined by funders, or until they either had a permanent academic position or had secured research funding for which they were the Principal Investigator, or both.

*I guess at the end of this current project. Because I had my last chance to apply for ESRC Future Leaders which I have got. So when I have finished that contract I will be far too far out of my PhD to apply for early career money any more. So I will have to progress to the bigger league and try and compete there. So at the end of my ESRC project I will stop being early career I think. (534 / F / 3 years since award of doctorate)*

*Well I suppose there are two different ways of looking at that, one is depending on whether you are no longer eligible to apply for early career research grants depending on whether it is the Leverhulme or SRHE or whoever offers those kinds of things depending on how they categorise them. The other one I suppose is a personal thing in terms of identity... (65 / M / 1 year since award of doctorate)*

*Perhaps if and when I was to secure a permanent position or – well no probably not then, I guess that would probably be a pre-requisite or a few years into having been doing what I do. If I stayed in teaching on a contract that didn't require me to be research active then I wouldn't consider myself an early career researcher as such. Maybe I would consider myself more an early career academic or staff member. So I guess maybe it has to do with the duration of time between completing the PhD and then the number of years in a role after that. (391 / M / 2 years since award of doctorate)*

One issue raised in relation to time elapsed since the doctorate was over was finishing dates, with several interviewees highlighting that the time between submitting the thesis, attending the viva and graduating can be quite lengthy:

*On the one hand you can look at it in terms of the amount of time elapsed since submission but of course you can look at it in terms of submission or viva date or completion because these days it is quite a protracted process. I waited four or five months for the viva, and had major corrections as well, so that was another four months...so in the last year I didn't do much work on it. But I did the first draft about two and a half years in something like that. So getting from that to actually getting confirmation was over a year. So that blurs the boundary as well if you like because I am not sure whether it is the year you finished it. Whether it is the viva, or for some people all three dates will be close together, but for me it was quite the opposite. There was quite a long time... (210 / M)*



The expert interviewees also gave a range of opinions on this topic. Most felt that it would be good to have a more inclusive, wider definition of an early career researcher that was focused less on the time that has elapsed since the award and more on attributes and skills. A definition that was criteria-driven was considered to be more helpful. One expert felt the debate should be much wider than academia and consider those working outside the sector:

*...the conversation is much bigger than early career researchers here or even early career academics...What about research and what about professional staff who are researching into their own practice? (Expert 7)*

## 4. The type and quality of support provided for early career social scientists

Survey respondents and interviewees were asked about the support available to them during and after their doctoral study. Overall, the survey respondents overwhelmingly agreed that their doctoral studies proved effective training for their current employment (86%) and for their desired employment (83%).

### Main sources of support

Respondents were asked to comment on where they had sought career advice and training before, during and after their doctoral studies. Respondents' doctoral supervisors and colleagues were the most likely source of career support, advice and training at all three stages of their studies. However, after completing their studies the importance of their line manager increased quite substantially. These findings are not that surprising given they appear to be linked to the study or work context in which the respondents find themselves. However, research funders, HEIs' careers services and Vitae were the least likely places for respondents to seek career support advice and training throughout these periods.

Apart from supervision and basic institutional provision, such as an institutional email address and access to library facilities, survey respondents reported they had received the following types of support during their doctoral study: Access to training (77%); Office space (77%); Funding for conferences (72%); Careers service (39%); Support for funding applications (29%); Mentor (26%); Funding for publication fees (15%).

- More female respondents (21%) than males (13%) mentioned a mentor as the most helpful/valuable type of support
- Those who had been awarded their doctorate within the last three years were more likely to mention the careers service (42%, compared with 37% of those four or more years after) and a mentor (28%, compared with 23% of those four or more years after) as the most helpful/valuable type of support
- Those who had been in receipt of doctoral funding from the ESRC were more likely to mention the careers service (44%) and less likely to mention a mentor (20%) than respondents with funding from other sources (39%-27%)

Respondents remarked on the important role played by *individuals*, such as their supervisor and other academic colleagues, in their preparation for employment after doctoral study. However, there were many who were critical of the level and type of *institutional* support on offer. Where it was available, this tended to be for a limited duration, which might not even have included the period for 'writing up' a thesis. Or the support may not have been available

remotely, if the doctoral student had to move away (including back to their home). More female respondents (41%) than males (26%) reported encountering difficulties in accessing support, advice and guidance.

The question of support, specifically after doctoral study, was explored further with the survey interviewees. The support broadly came from one of two areas: their doctoral institution or their current place of employment.

### *Doctoral institution support*

While some interviewees had received institutional support since graduating, the majority had received little or none. One interviewee, from a post-1992 university, had tried to access the careers service while writing up his thesis, but the staff did not know what to do with him as a doctoral student.

*As far as the institutional support whilst I was in the process of writing up I went to the career's office for advice and talked to them about career options and the person I was speaking to literally had no idea, they just said 'There is nothing we can do to support you or help you, we have never had a PhD student come through the doors, I don't know what to say'. (159 / M)*

Several reported that neither their institution nor their supervisor felt any responsibility to their PhD students once they had completed.

*They seemed – not to name any names - but the professors there seemed to think that they cut all responsibility for you as soon as you finished your PhD, even to the extent of references in my case, which made life quite difficult. (534 / F)*

Furthermore, many were not aware of what support, if any, was available. Others felt the lack of support was as much to do with their personal circumstances and requirements as it was to do with the institution itself. For example, several interviewees had moved away from the area on graduation, which they felt made tapping into any subsequent support difficult at best but largely unfeasible. Others had not perceived that they needed institutional support to take their next step.

*But really there hasn't been a very big support in the sense that I haven't needed it either so I haven't sought that support and I have never felt that that was required. (709 / M)*

University alumni networks were mentioned by some interviewees, but most viewed them as a mechanism for seeking financial donations or as a way of generally keeping in touch, rather than having anything to offer for career progression.

Just four interviewees reported a very positive experience in terms of institutional support, three of which were from Russell Group universities. Studying at a Russell Group university one interviewee described the support she had received from the career service as 'excellent', commenting:

*I was able to go and discuss things with the careers office, I was able to go and talk with them about what I should be doing. Secondly...I continued to do tutoring and because of that was kept in the loop about what was on offer in terms of seminars and stuff. But I also was able to keep my academic email address. And I was just thinking yesterday that had really been crucial... (648 / F)*

Many interviewees did, however, report continued support from their supervisor and this appeared to be the main – and frequently the only – source of support for many, with some viewing their supervisor as taking on the role of a mentor.

*I get a lot of support from my PhD supervisor, I know I can go back and talk to her and ask her about certain things. You know when I was getting jobs, so from my first job to this job, getting letters of recommendation and that kind of stuff. (446 / F).*

*my supervisor has been absolutely flat out brilliant in being supportive, sending job adverts that I might have missed, writing what I can only guess are really good letters of reference and he has been absolutely great and my second supervisor I don't need to rely on him as much but he actually is very good and responsive as well. (807 / F).*

However, not all supervisors were supportive after doctoral graduation. The reasons given by interviewees varied from the supervisor not necessarily being in the same research area as the interviewee, or the supervisor had left the institution, either moving or retiring. In some cases, interviewees were employed at the same university where they studied and some found it difficult to identify whether the support they were receiving was as a doctoral graduate or as a member of staff.

Interviewees were more likely to receive individual support from their supervisors, or other academics at their institution of study, than as institutional provision. This interviewee summed up the experience of many:

*I don't really think there was any kind of institutional support. I have received ongoing support from individual people from my PhD supervisor, from some other people from the department. And some things such as looking at job applications, looking at paper drafts, but even such things as getting access to papers from the library, because I have no access to institutions. So but it was all about individuals. (445 / M)*

For many interviewees, the main issue was not institutional support following their award, but support and training *during* their doctoral studies that ensured they were job-ready – regardless of the sector they wished to work in. As one frustrated interviewee commented:

*I think that one thing that the university as a whole doesn't really do, it doesn't really prepare you for the jobs market... And it is often quite contradictory advice...because the emphasis is on getting the PhD done and that has to be first and foremost because the university gets blacklisted if their students aren't completing within five years I think it is now... but at the same time I think everybody knows that you can't get a job in academia with just a PhD, so you do need to be doing all these things on the side, research assistant, internal publishing and teaching and writing blogs and things and engaging with the policies communities in my field... I think that that is not really acknowledged. I think that is something that I found really really frustrating, throughout the PhD was the fact that I knew I needed to be doing all of this other stuff but your supervisors in the university don't really acknowledge that you are doing that– it is sort of like the elephant in the room. I guess publishing is the number one thing because at the end of the day if you don't have publications you are not going to get your next job... (17 / F)*

#### *Current employer support*

Support from the interviewees' current employer, at the appropriate level, varied greatly. Some interviewees did not know what training was available – mostly because they were new in post this academic year. Some had no structured continuing professional development (CPD) at all, despite being full members of staff. Others reported they would need to be pro-active in seeking out support and training while others still had a full training programme appropriate to their level and needs. Sometimes the support was very different to what had been available from previous employers. The types of support included being allocated a mentor, departmental training and the opportunity to take the postgraduate certificate in academic practice.

The different experiences and types of support available – both positive and negative – are illustrated by the following quotations:

*It is quite fragmented. I have been offered some training courses, I am on a research leadership course at the moment which is actually really good. (470 / F)*

*I feel like I am in a professional institution that is ensuring I have the skills that it needs to know I have to do my job. And that those skills are useful to me as well as to the institution so I can put on my CV that I have got a postgraduate certificate of higher education, which is quite good really if I want to be a university lecturer and yet no-one has even mentioned that in the University*

*[I was at before] so it is a different environment and it is a supportive one... (558 / F)*

*Among other things I am part of an early career researchers' development programme that [post-1992 university] has put in place to try to promote excellence in all researchers... it involves opportunities for training, opportunities for networking, and a number of activities which you could qualify more as social. But I think at the core it is...giving us training opportunities. (709 / M)*

*[Pre-1992 university] is fantastic with training, there is training all year round I will say it is mostly about teaching and student experience and supervising research students. There are some opportunities for applying for grants and learning about the impact...I have signed up for stuff all the way through until next April, even though I have only been here two weeks. (123 / F)*

*No, my current employer doesn't offer any form of support in any respect. (269 / F / outside academia)*

A small number of interviewees had received an exceptional amount of training and support, but this was largely because they had been awarded a post-doctorate position which carried with it a large training element, as this interviewee explained:

*I have had probably every kind of training that there possibly is, the reason being that one of my post-docs there was in an Institute of Advanced Study, which is kind of a specialist early career training facility and what they do is they give you a post-doc for however long you win one and then you get weekly training in anything and everything. So every week I would go in but you would get like media training, impact training, public engagement training, a lot of grant application training, anything but teaching basically because it was more of a research focus training institute. (534 / F)*

Those working outside academia were less likely to have a structured support and training programme specifically aimed at post-doctoral level.

The question of what type of support should be available was followed up with interviewees. In contrast with survey respondents, among interviewees there was a general feeling that doctorates currently do not equip doctoral graduates for employment in the academic sector, or any other sector and that support should be available a lot earlier and based around both *generic* employment skills and *discipline-specific* competencies. For example, the opportunity for teaching, how to apply for competitive bids and how to write publications for quality journals: skills that would make them, as doctoral graduates, more employable. Other suggestions included: workshops, the development of a community of doctoral students – perhaps using social media for example LinkedIn, training in research management and methods

training beyond their specialism. Mentorship schemes were also suggested as being useful, as were national post-doctoral training centres or sessions that could potentially be run by the ESRC through the DTCs.

Ultimately, what interviewees would like is to know during their PhD what they have to do to take the next step, to understand their career options, both inside and outside of academia and to have a realistic view of how to achieve their goals. Ideally support would start in the second year of their doctoral studies, or earlier. This type of skills and attributes development and training was also strongly supported by the experts we interviewed.

One interviewee suggested that doctoral students could be given time out – perhaps three months – to apply for jobs or write funding applications.

*I think there should be additional time, or at least the opportunity for the students...to take three months off and look around for a job. Or write a fellowship – because when you are in the middle of a PhD that is all you think about and then suddenly you are left stranded afterwards...The thing is we don't actually have the time.*  
(647 / F)

Another interviewee advocated developing a wider skills-set during studies:

*...you need to do outreach work, do other things which are associated with building a broader CV rather than just get through a PhD in three years which is what I did and kind of came out of it with a PhD and very little else, no publications, no kind of broader working and therefore had absolutely no hope of an academic career really beyond then taking a couple of years unfunded or funded through part time jobs*  
(159 / M)

The following extracts highlight some of the issues interviewees faced and the type of support and training they would like to see in place.

*I would like to know and I still haven't got the answer to this how I identify three or four starred journals because there is a lot of pressure as you will be aware to get published in three or four starred journals... (177 / M)*

*Very clear guidance on what it takes to follow the path you choose to follow. If it is in academia how to succeed in academia. Well everyone seems to know but I am not from this country so I have no idea. I have no idea that you were supposed to start publishing before finishing your PhD for instance... (269 / F)*

*I think it is more just to open your eyes to the range of things which a PhD can do for you, you know there are a lot of options and a lot more people have PhDs than are in academia and they are doing a whole range of things. I know of some industries particularly who want people who have got PhDs in certain subjects so knowing that those are available and yes just as credible as a career option as going into academia. (24 / F)*

*I think from a very basic being able to retain some sort of affiliation. I mean I did some lecturing there, I did some seminars, so I was affiliated for some time after that and I was a lecturer for six months. However that was just because there were opportunities that arose at that time, otherwise there is no affiliation. So affiliation is one thing that is helpful... (207 / F)*

Continuing professional development (CPD) was seen by many as an ongoing requirement – regardless of the stage of career – that should be provided by all employers. However, many interviewees reported that this was not currently the case. Many did not seem to be offered, or have access to, a structured career development programme, or even regular appraisals and target setting. Many also suggested that supervisors should receive (more) training on how best to support and develop their doctoral students beyond the doctorate. Again, the experts were supportive of this suggestion. However, they did point out that supervisors may not necessarily be in the best position to advise those who do not wish to take up a career within the academy.

One interviewee advocated extending the time it takes to complete the PhD to ensure continued support and allow access to services that are often cut off as soon as a student leaves:

*...take the full three and a half years and take four if you have to, like it is better to spend a few months struggling as a PhD student because you have taken a bit too long than it is to come out as a PhD student and lose access to support that you have, even things like access to your university library, like that is a fairly essential thing if you want to continue working, so stay enrolled for as long as possible and get as much done as possible during that time. (159 / M)*

Views on how long support should be offered to early career researchers varied from one to two years to indefinitely; most felt it should be for a minimum of two years. Some suggested that the academic probation period is a good length of time, while others felt it should be an ongoing career development process and not necessarily time limited; *'I don't think you should ever stop developing your career until the day you retire probably'* (622 / F). Some felt other criteria should be considered, such as an individuals' competencies and experiences as a researcher. This is broadly in line with interviewees' views on defining who or what constitutes an early career researcher, and is demonstrated in the quotation below:

*In this case it is more about supporting people who are taking their first steps if you will in developing research or developing a research focussed agenda. I have some colleagues in the programme who are senior lecturers and some of whom are still working to get their PhDs and some of whom have completed their PhDs quite a long time ago. It has to do with the fact that some of these people have been essentially teaching and*



*lecturing at university level and have not had the opportunity of developing a research agenda. (709 / M)*

There was no consensus on how long support should continue after completing the doctorate. Some defined it by the number of years since completion of a doctorate, others by the type of position held and the permanence of that position. For example, being awarded research funding in one's own right and securing a post as a permanent lecturer was for many the marker of a transition from early to mid-career. However, many viewed support to develop their career as an ongoing requirement that should be met by their current employer, regardless of the career stage they felt themselves to be at.

Finally, interviewees were also asked about their awareness and experience of the ESRC Doctoral Training Centres (DTCs) in terms of accessing and receiving training both during and after doctoral studies. While most (29) interviewees had heard of the DTCs – even if only vaguely – just one had accessed them for any kind of training; this was a summer school. The interviewees' lack of engagement with the DTCs is largely because all of those interviewed had commenced their doctoral studies prior to the DTCs being launched. However, there was a belief that the DTCs could potentially play a future role in developing, training and supporting early career researchers.

Many survey respondents (in their open text responses) and interviewees commented on the need to develop a more realistic understanding and accurate portrayal of the difficulties of forging an academic career. Some felt that, if they had known this, they would have given more consideration to career opportunities outside academia from the start. However, many referred to an assumption by doctoral supervisors and other academics that a career outside academia following doctoral study is a failure. Many participants in the study also wanted continued affiliation to their doctoral institution beyond their registration as a student, for example, as an associate.

A variety of support was available to survey respondents and interviewees in their current academic institution if they were employed. The most praised of these included: a full training programme appropriate to the individual's career stage and needs; discipline-specific departmental training and seminars; being allocated a mentor; funding to attend conferences and other networking opportunities; small grants for developing teaching; the chance to take a postgraduate certificate in learning and teaching in higher education or academic practice. However, study participants reported variations in the time available to them to take up some of these opportunities.

Those working outside academia were less likely to have a structured support and training programme specifically aimed at the post-doctoral level or time to access one, if it existed. Some had found that support, advice and guidance from national research funders appeared to be 'off-limits' to those working outside academia.

## **Biggest barrier to achieving chosen career**

There were 741 responses (71%) to the open-text question on the biggest barrier to survey respondents achieving their chosen career. Problems highlighted included: accessing funding/jobs (34%) with a third of those making explicit reference to competition; the requirement for high-quality publications (15%); lack of time (15%); demands of teaching (6%). The problem of short-term contracts was mentioned by 14% and 10% referred to problems relating to family responsibilities (e.g. need to re-locate). In addition, 6% highlighted issues relating to their (female) gender, e.g. having children being seen as a barrier, which was mentioned too in interviews.

## 5. Funding opportunities and their impact

Funding opportunities available to ECRs in the social sciences are rather limited in range compared with the physical and natural sciences. However, in some social science subjects, e.g. psychology, it is not unusual for applications to be made to related research councils (e.g. the Medical Research Council and the Biotechnology and Biological Sciences Research Council) especially as part of larger multi-disciplinary projects. The key schemes at the time of the survey were:

- ESRC Future Research Leaders Scheme
- British Academy Postdoctoral Fellowship
- British Academy and Royal Society's Newton International Fellowship Scheme
- Leverhulme Trust Early Career Fellowships
- Wellcome Trust Research Fellowships (Humanities and Social Science)
- Small-scale schemes offered by individual UK universities

None of the national schemes cover the full economic costs (FECs) of the fellowship or research, with the Leverhulme Trust being notable for requiring 50% funding from the host institution. In total, these schemes provide fewer than 100 ECR positions each year.

### Current funding

The funder of survey respondents' current main employment was primarily the institution [education institution (49%) and research institution (7%)], followed by the ESRC (9%), government (central and local) (8%) and other research council (8%). The nature of the award funded by the ESRC was mainly the Future Research Leaders programme (32%), "research fellow on grant" (31%) and co-investigator on grant (10%).

### Making applications for funding

One-quarter (25%) of the survey respondents reported not having submitted any applications for postdoctoral funding, and 42% of all respondents reported having at least one application for funding for postdoctoral work funded. However, this could have included small amounts of institutional funding, for example, for conferences and open access publications.

Over half the respondents (in their open text responses) and many interviewees felt there were barriers to applying for funding, either at the national level, in the rules and criteria of funding organisations, or at the institutional level, in the lack of advice and support and as a result of institutional efforts to limit the number of unsuccessful applications for external funding. There were many comments about the length and complexity of the application process and the low chances of success. One fifth (21%) of the survey respondents highlighted the requirement to be on an open-ended

contract (i.e. 'faculty' or 'permanent' academic staff) before being allowed – by the funder and/or the institution – to submit research grant proposals, e.g. “To be eligible for many funding programmes requires a permanent contract with a university, but to get a permanent contract you need to have secured funding - vicious circle”.

### **The “Catch 22” issue of not having a permanent contract**

Many interviewees felt trapped in a cycle of no funding, no (or few) publications and/or experience of managing research projects, meaning no permanent posts were open to them, which in turn meant it was not possible to submit funding applications since they were not attached permanently to any single higher education institution. As one frustrated interviewee who graduated 11 years before, and still defined herself as an early career researcher, commented:

*I asked for feedback in my current post when they hired me because I wanted to know why I hadn't got the permanent job that they were hiring for and one of the things they said was that I wasn't in a full-time academic post when I applied. That was why I was applying for the job! So it was a weird Catch-22. It is hard to pursue funding unless you are in a permanent role... if you are in a temporary job the funding application process is slow enough that everything may change by the time you actually got the application through. (807 / F)*

*...one of the things you need to have in order to be – you know on your CV – is to be able to attract some money, you need to have some pound signs on your CV somewhere. And grants that you have applied for and preferably obtained. The problem is that if you are a contract researcher particularly as a 0.5 or a limited term, you can't apply for any funding. So again you are in this Catch 22 situation. (65 / M)*

*I still am pillar to post short term, I am not able to develop an independent career, an independent research profile and in fact any independence at all. The funding systems in universities penalise against me because I am young and cheap and unknown. The universities penalise against me because I don't have teaching experience. The funding bodies penalise against me because I am not asking for huge sums of money and I haven't got my own salary because I am not in a tenured post. So I have to also apply for my salary when I apply for my research costs... (558 / F)*

**Respondent:** *But my institution wouldn't let me apply for it [FRL] because they didn't cover all the overhead costs and fund 100% FEC. And so they weren't able to support me because I wasn't on a permanent contract.*

**Interviewer:** *And would they have done, if you had been on a permanent contract?*

**Respondent** : Yes. Because when I am on a permanent contract they get core funding for me and then they would be happy for me to bring extra money to buy out my teaching for example. But they weren't able to let me do it because I didn't have a permanent contract because they would have to meet the difference. (24 / F)

### **Lack of institutional support**

Several interviewees spoke about the lack of institutional support and knowledge of funding applications, and how this related to the issue of patronage.

*I am still feeling my way through and rather blindly and you know funding bids and how you put them together and the mysteries of all those things that we are expected to do... how to write a funding bid or the mechanics of it rather than the wording of it. What do you do with it, who does it go to, who has to approve it, who signs it off on it, all those kind of things which I guess varies from one institution to another... I probably should know the answer... but I don't. I don't know where to look. (177 / M)*

*I applied for the Future Research Leaders scheme twice. The first time I applied for it one of my administrators at my institution literally ticked the wrong box and they sent it back to me. So I had to wait a whole year and apply again which is potentially a year not being able to pay your mortgage and then I applied again in the middle of October and then I didn't get a funding decision until June, which I think is absolutely unbelievable, the amount of time they take... (470 / F)*

*I think the main problem with academia is, I'm afraid to say, patronage, you know lack of money which pushes up this problem with patronage. (207 / F)*

*My supervisors, neither of them are great at bringing in research money basically, so there was never that as an opportunity (19 / M)*

*I personally think that securing funding is a skill in itself and it is certainly wasn't a skill that I was either taught or required to research for my PhD and I wish I had spent more time doing it so that I would be in a better position when I had finished the PhD. (407 / M)*

### **Institutional support from knowledgeable and experienced universities**

This interviewee reported a high level of institutional support when putting bids together, '*...they do a lot of training for how to write those [bids] and...there is an active research office at each school, not just each division but each faculty there is a research office,*' (123 / F). This is in stark contrast to the experience of many interviewees.

Some Russell Group universities (notably Oxford) have internal funding competitions. This ensures funding applications are not only competitive but of the highest standard before being submitted, thus giving submitted bids a greater chance of success.

*...one of the reasons why Oxford is so successful at its funding bids is that it works very hard to make sure that the bids they put in are strong and competitive. They are internal Oxford rounds within divisions so my work would be compared against proposals from Economics and only one of us would be allowed to go through, which means that of the bids that go up to the University at ESRC level are already competitive and won against others. (123 / F)*

### **Supply and demand**

Interviewees pointed out that the size of the funding pot was shrinking, while at the same time the number of people applying was increasing, leading to growing competitiveness and decreasing chances of success. Interviewees also felt there was a greater chance of success if you were at an institution or department with a track record of winning research council funding.

*...when you look down the list of where the money goes, it doesn't go to that many different institutions... I genuinely get the feeling that the money doesn't spread out very much.... they often tell me that it is hard to get money out of the research councils unless you are in the golden triangle. (671 / M)*

### **Experiences of applying for ESRC and, specifically, the Future Research Leaders (FRL) scheme**

Interviewees were asked to comment on their experience, knowledge and success in applying for research council grants, particularly in relation to the ESRC. Most were aware – if only vaguely – of at least some of the types of funding available from the ESRC, notably the Secondary Data Analysis, Post-doctoral Fellowships and the FRL grants. However, few had actually made FRL applications and even fewer had been successful.

While many interviewees were complimentary about the ESRC, with several having been funded by the ESRC for their doctoral studies, most were critical of the ESRC funding application process – particularly its complexity and timescales – but also the quality of the feedback received on failed applications and the size of available grants for those early in their careers.

*...you put so much time and effort into it and then you don't get any feedback, it is a difficulty, because you don't know what you did wrong and you don't know what you did right. (766 / F)*

*...sometimes you feel that because there is not enough funding and they obviously have got to find a reason to say well we are not going to go with this, and it just doesn't seem so much about the idea sometimes. Which you know is more about... 'Oh you haven't published in sufficiently high journals to...or you haven't published in a journal that is relevant to the people we are trying to reach...I just find all those sorts of excuses, it is quite annoying. (62 / M)*

*My experience is that they take far too long to get back to you that is the main thing. I applied again in the middle of October and then I didn't get a funding decision until June, which I think is absolutely unbelievable, the amount of time they take...and then eventually in June they told me I didn't have the funding. And there was a lack of feedback at the very end, you know the reviews. Reviews from the reviewers when it obviously got shortlisted and then when you don't get the funding it is not clear why you don't get the funding. (470 / F)*

As well as better feedback from the ESRC on their failed applications, interviewees would like more information on who is successful and why. One suggestion was that profiles of successful applicants for the different schemes indicating typical career stage and number of publications would be useful.

Many interviewees felt that the FRL funding was not appropriate for early career researchers. It was perceived by many as being too extensive, both in terms of the amount of funding awarded and the detail required in the application, as well as being too long in duration, as these interviewees commented:

*...looking at Future Leaders it probably seems a bit much like having to invent the magnum opus you are going to write while you are still finishing your PhD or only just sort of starting afterwards. (595 / M)*

*I think personally they need to get rid of Future Research Leaders as it currently stands and issue smaller awards to more post-doctorates rather than concentrating their funding in 40 or 50 longer projects. That is because as an early career researcher you don't need £200,000 for a couple of years to build your career, what you need is to demonstrate that you can get some money. So a smaller award to be doing a one year fellowship that kind of level of support is actually what would be the most important thing for career progression. (159 / M)*

*...now between the PhD and the FLR, which is massive, it is a good scheme I think, but something like a stepping stone in-between is missing. (445 / M)*

Interviewees would therefore prefer smaller pots of funding for shorter periods of time; funding to develop and test ideas rather than requiring full-blown projects at this early stage:

*...it would be nice to have some smaller grants for people who have got some original ideas that they can run with rather than these...big set piece things. Because that is quite difficult, you have to be a bit further down the line. (62 / M)*

Many felt it was a shame that the ESRC small grants scheme was no longer offered:

*'[w]hen I first got to the UK the ESRC had a small grants scheme... then it went away and that made it a little bit more difficult because they are asking for more money, for bigger budgets and if you are an early career fellow you kind of want to build up to that... (446 / F)*

*I think the ESRC used to have specific bursaries and funding I think for a year which would have been absolutely excellent [for] those who wanted to carry on with or produce much more in terms of publications and refine the research done in the PhD. And I think that was absolutely excellent. (207 / F)*

### **Positive experiences of applying for funding**

There were some positive experiences and successes in both applying for, and securing, ESRC funding. Although just one interviewee, a male (671), had a FRL application pending, he reported a positive experience of the application process, commenting:

*I thought it was quite a clear process actually. We have got good support from our research finance or funding office, whichever they are called, so I could have a chat with them about the costings and things like that that would be new to me. So that was the bit I would know the least about but actually support from my institution was very good there. You have to identify a mentor as part of that so again I found support from him and he has had seven or eight ESRC grants before. And the process...the JISC system and everything I thought was fairly self-explanatory, there is help guidance of every section so yes it is not too bad, I thought it was fairly straightforward. (671 / M)*

This interviewee highlighted the importance of having good institutional support and mentors with previous ESRC application experience when applying for funding. The interviewee had also been involved with writing and submitting other funding bids in the past and was therefore familiar with the institutional process.

One interviewee (a post-1992 university graduate eight years previously, who had successfully secured an ESRC placement Fellowship and had held a



number of short-term contracts both inside and outside of academia in the interim) had secured three sets of funding at his current post-1992 university where he had been a temporary but full-time Senior Research Fellow for the previous 20 months with no teaching responsibilities. He had two sets of funding from the EPSRC – the Support and Network Plus funds – and one from a local academic network. This interviewee had also applied for several pots of funding for which he was unsuccessful. He was also named as being either a Co- or Principal Investigator on the majority of applications. He reported that his institution was ‘*very supportive*’ and ‘*...very good at letting post-docs be lead researchers, be PIs on bids which has been really helpful.*’ (259 / M). However, apart from successfully applying for the Placement Fellowship some years previously at his original doctoral institution, he had not recently applied to the ESRC for research funding. When asked why this was he replied: ‘*I have been opportunistic really. I have applied where there has been a fairly good chance of succeeding, where I have had inside information if you like,*’ (259 / M). He had not felt that the chances of success at the ESRC were favourable, especially as his current post-1992 university did not have a track record of bringing in ESRC funding, with just one big ESRC grant at the institution. He therefore felt it would be a futile exercise to spend time on ESRC applications at this time commenting:

*I just don't have the confidence that I would know what to do. I think without kind of mentors who have applied successfully I think it is an enormously risky thing to do. You are probably just wasting your time because as you will know, well to my mind, it is tactics. And knowing what not to waste your time on and knowing the kind of tricks of the trade. (259 / M).*

Despite this interviewee’s experience and success of applying for external funding, he still lacked the confidence to apply to the ESRC. His comments echoed the sentiments of many interviewees.

On a more positive note, one interviewee had been successful in securing one of the ESRCs Transformative Research grants. Less than three years from graduating from a prestigious Russell Group university in psychology, working as a cognitive neuroscientist researcher, this female interviewee had initially secured a three-year post-doctoral research fellowship six months after completing her PhD. The funding was renewable year on year on condition of the awardee securing further research funding since ‘*...it offers only a stipend and no research costs, so that has meant that I have had to have been quite proactive in getting my own research funding which I think has been a good and a bad thing,*’ (622 / F). This interviewee had also spent time at an Ivy League university as an Exchange Fellow and had been offered a prestigious faculty position and was planning to run this and her ESRC position consecutively. However, the success of this interviewee was the exception rather than the rule. Many felt receiving funding from one of the research councils was key to career progression, but was out of reach for them in the current format.

Survey respondents were more likely to have been successful in applying for funding for postdoctoral research if their doctoral institution was Oxbridge (47.4%) or an international university (45.5%) than another Russell Group university (35.5%) or other UK HEI (32.3%).

### **Specific issues for women ECRs**

There was a feeling among the interviewees and experts that there are still some specific issues that relate to women. This was supported to some extent by the findings presented above relating to the gender and type of contracts of interviewees. It was also a strong theme that came through in comments in various parts of the survey.

There are many (often complex) issues around gender, some of which have been evidenced previously (i.e. the quotation from a female interviewee (123) in the section on 'aspirations versus reality'). The most obvious issue centres on having a family and balancing maternity leave and subsequent childcare. This often delays career progress and results in women considering themselves to be 'early career' for longer. However, other issues also came to light – predominantly from the expert interviewees. These included bullying of female early career researchers by male principal investigators, discrimination when women take career breaks or have to juggle childcare with work, and the academic culture generally not being conducive to family life – for either men or women. Some of these issues are highlighted in the following quotations from the interviewees.

*It is no coincidence that we as a sector...and my institution, the majority of PhD students are female, the vast majority of professors are male and that is not a historical thing...There needs to be a recognition that researchers and academics are normal people who work and therefore are subject to the normal pressures of life and people have the same rights and responsibilities as any other worker in any place. Just because you're a good researcher doesn't make you a good manager and this I think affects women particularly... you do come across women who are being told, when they complain, that they are just 'being emotional' and 'this is how it is in a lab and this is how it is in the academic thing and you need to toughen up and man-up, you need to man-up' (Expert 1)*

*...the data show it clearly, the flip-over and the gender balance between undergraduates and doctoral degrees and then onwards employment is striking and it doesn't seem to be notably improving and I think that's a very complex set of issues. In terms of having children, etc. – and it's a very notable thing that many, many of our doctoral students, especially the funded ones, make very careful decisions about when to have children, based on their funding periods and things like that, in a way that I have never yet encountered a single male student who'd be talking about that. (Expert 5)*

*It has delayed us having a family, we have been married two years and it took longer to get married than we thought and we still haven't started our family because I don't know whether I will have a job to take maternity leave from so absolutely everything has been delayed waiting for my career to settle down. (123 / F)*

## **6. Survey respondents' and interviewees' suggestions for improvement**

Participants in the study were very forthcoming in offering suggestions and detailed ideas for doctoral institutions, current employers and research funders.

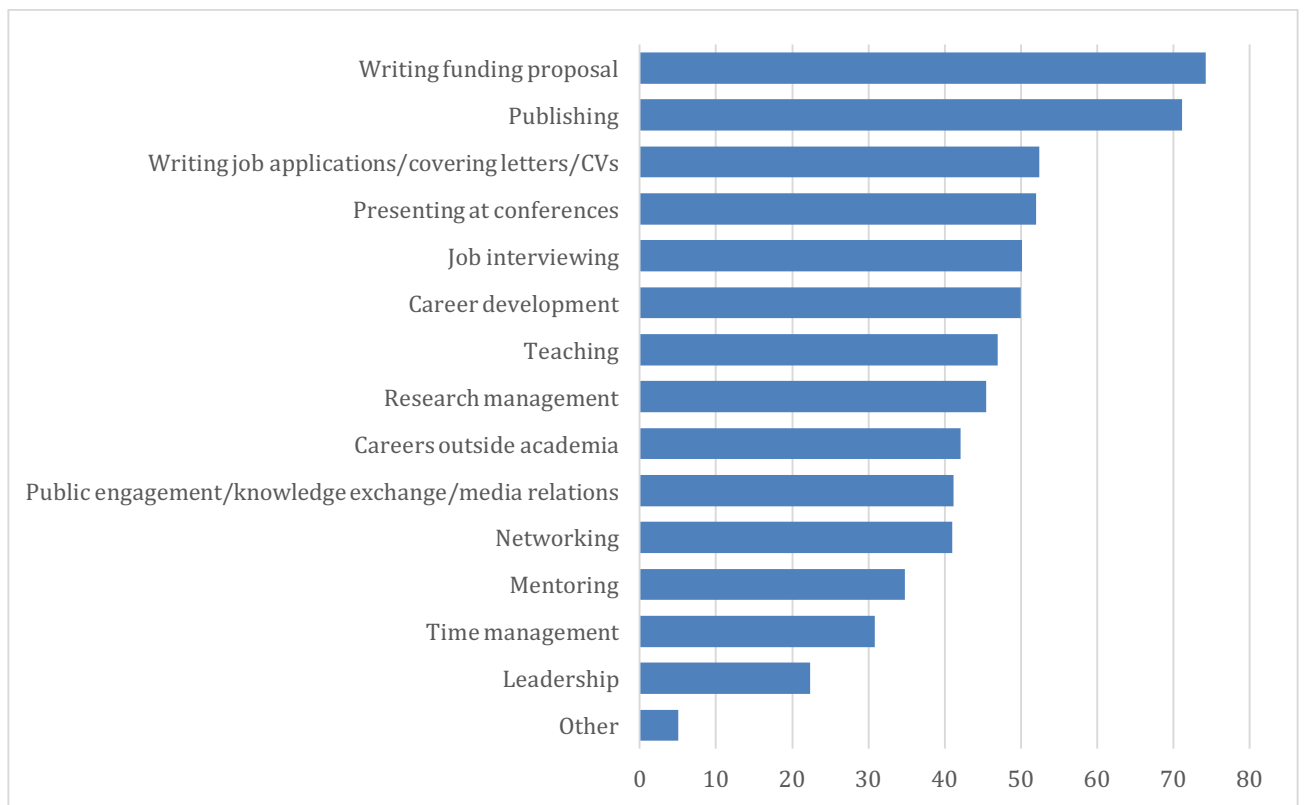
### **Making doctoral studies a more effective preparation for employment**

Almost a quarter (24%) of survey respondents made references to wanting some experience of teaching, with respondents generally wanting opportunities for teaching and obtaining training and/or a suitable qualification, noting how such experience was necessary for posts involving teaching. There were 133 (21%) references to publication/publishing with a particular emphasis on the need to publish early in the doctorate and in high-quality/high-impact journals and 15 referred specifically to the REF (Research Excellence Framework). In addition, 105 (17%) referred to the lack of training in grant writing, grant application and grant management despite their importance after completion of their doctorate. There were 57 (9%) who indicated a wish for greater networking opportunities, 41 (6%) references to acquiring administrative skills or experience, and 22 (3%) requests for information about non-academic options.

### **Types of support preferred**

As reported above, the support that respondents would most like to access was writing funding proposals (48%) followed by publishing (39%), career development (38%) and research management (35%).

Respondents were also asked what types of career support, advice and training they would recommend to someone undertaking a similar doctoral path to themselves. They were able to select more than one option. The top two recommendations were writing funding proposals (74%) and publishing (70%). This closely mirrored the type of support respondents would like to have most access to. However, their third recommendation would be in the area of job applications (52%). The chart below details all of the respondents' responses.



**Figure 4. Training during doctoral study that respondents would recommend to someone else on a similar doctoral path (percentage responding – respondents could select more than one)**

The survey responses showed the importance of individual support and therefore of briefing, training and support for supervisors and line managers in ensuring effective provision.

### **Support for those working outside HE**

Interviewees made a number of other suggestions for how early career researchers might be better supported before, during and after their studies. Some were addressed to the host doctoral institution, some to the current employer and some concerned the ESRC (or other funding councils). One popular suggestion was that there should be more training in skills and competencies – generic and discipline specific – and that this should happen much earlier. Many felt that such training should be an integral part of the doctoral process, and not an aside or a bolt-on.

Interviewees also wanted to retain continued affiliation to their doctoral institution, and access to an institutional email account and library services were ways they felt this could be achieved at minimal cost. This suggestion was also supported by the expert interviewees, several of whom thought this practice was already commonplace. One interviewee suggested an online social media forum could be established, for example on LinkedIn. Many did

not view their university's alumni association as an appropriate or a useful place for continued affiliation, with few interacting or retaining contact with this.

Some interviewees would have liked to see more, and better, data from the ESRC on the profiles of successful applicants to the FRL (and other funding) schemes. However, many interviewees simply wanted greater clarity and honesty about the reality of the career options both inside and outside of academia, along with the relevant support and training to help them decide on, and achieve, their chosen career path.

*Very clear guidance on what it takes to follow the path you choose to follow. If it is in academia...how to succeed in academia. (269 / M)*

*I think it is more just to open your eyes to the range of things which a PhD can do for you, you know there are a lot of options and a lot more people have PhDs than are in academia and they are doing a whole range of things. I know of some industries particularly who want people who have got PhDs in certain subjects so knowing that those are available and yes just as credible as a career option as going into academia. (24 / F)*

*...there needs to be much more detailed support about the variety of options for social science careers that don't just involve academia. And just so that people are aware that it is not [just] academia, there is a range of other things you can go and do and just being able to be pointed to where those things are, where you can find information about them that would be a useful start. (159 / M)*

### **Suggestions from the 'experts' about forms of support**

Experts were asked to particularly consider low-cost solutions to the future support of early career researchers such as: drawing on the expertise that already exists within the higher education system, better utilisation of the DTCs (or the Doctoral Training Partnerships, which replaced DTCs in late 2016), changing the nature of PhDs to be more like the North American model where students work while they study and encouraging more partnerships with those outside the sector, e.g. industry, non-government organisations (NGOs), the private sector and professional bodies. These were seen as areas where other disciplines, such as the natural sciences, engineering and medicine, have long since had mutually beneficial collaborations for doctoral graduates early in their careers. Given the number of doctoral graduates expected to be employed outside the academy and the fact that this is likely to increase in the foreseeable future, this would seem to be a sensible area for social scientists to develop. Some suggested this role could be taken up by the ESRC.

*...in North America, funding packages are made up of work; so students will get a teaching assistant-ship and research assistant-ship and together that will make a package. So there are plusses*

*and minuses to that but of course one of the minuses is that it slows down people's progress, in the sense that they're working. But if we look at the reality, most students are working anyway (unless they're fully funded), so at least here they're working at things that will prepare them for an academic career if they want it and it's, in a sense, low cost, in that you need the work done.*

(Expert 4)

*Much more partnership with the private sector would really help this. The Natural and Engineering Sciences have fantastic models for this and have been doing it for a very, very long time. I know that's what the ESRC is trying to do but it's no good forcing universities to do that; the ESRC has to get out there and bang the drum and say, 'We're helping you, you've got to step up to the plate too, with the university's help' – because at the moment they're putting huge pressure on the universities to do that but not really getting out there and trying to force it the other way...*

(Expert 6)

### **Suggested ways forward: views of the 'experts'**

Experts were also asked to comment on a number of ideas put forward by the interviewees or suggested in survey responses.

#### **a) One-year post-doctoral funding to complete publications, apply for funding, etc.**

This suggestion was well received by most of the experts interviewed, one suggesting it could be billed as a PhD Plus. Some pointed out that this was exactly the role the ESRC Postdoctoral Fellowship awards used to fulfil. However, caveats were introduced and concerns expressed about this suggestion. If such a scheme was implemented then it would need to be structured in such a way as to ensure the objectives were met.

*...it would need to be highly competitive, so it's seen as a badge of honour, rather than a, 'You'll never get around to doing that!'* (Expert 7)

Also, there were concerns that such a system would not be equitable and would lead to inequalities in the system, disadvantaging non-ESRC funded and, in particular, overseas students.

*I suppose there are implications as well, maybe not for ESRC-funded students but certainly for the international students, they're having to return home or find a job and stay here and things that we do for funded students we try, wherever possible, to make that possible for unfunded students as well. So I suppose if there was something really lovely and shiny that was open to ESRC funded students, we would have to think about how we make that available to unfunded students.* (Expert 3)

While one expert felt it was an 'excellent idea', they also thought it was an admission that the current three-year funded PhD programme does not work:

*It's saying the 3 year model doesn't work, that's basically what it's saying and I think at some point the UK, and I guess the EU because of the Bologna agreement, is really going to have to say, 'In effect what we're doing is we're putting part of what used to be in the doctoral period, into the post-doctoral period, we haven't changed the learning, all we've done is changed the role.'* (Expert 4)

#### **b) The development of a National Careers Service for postgraduate researchers**

This suggestion was received with less enthusiasm. It was viewed as an expensive solution and it was pointed out that there are existing structures that could or should fulfil this function, e.g. Vitae or the DTCs. In Scotland, there exists the College of Social Science and the Scottish Graduate School of Social Science that could potentially be used to a greater extent. Regional provision and support, if anything, was favoured over a single national body, but mostly it was seen as something that the universities should be doing already.

One interviewee suggested a 'just-in-time' or one-stop-shop, online resource akin to the EUI Careers Observatory that already exists: an easily accessible resource with everything in one place:

*...I mean, for ESRC to invest in something that was really global, in the sense of not just academic but a whole range of careers, on one site, that, to me, might be ultimately more effective if it was done well, than trying to set-up some kind of service.* (Expert 4)

#### **c) The ESRC should provide more training, advice and support through the DTCs**

Utilising the DTCs (now DTPs) was viewed by most of the expert interviewees as a better way of driving forward support, advice and training for early career researchers than setting up a new National Career Service. One expert interviewee suggested the DTCs could be used as a broker, encouraging big companies to run training sessions regionally on areas relevant to early career researchers.



**d) Doctoral graduates should have continuing access to academic libraries and email accounts**

This suggestion was enthusiastically received by all of the expert interviewees and viewed as a relatively low-cost initiative. Some also suggested it should be possible to have continued affiliation to the student's doctoral department:

*I think especially IT services and email are absolutely crucial. And not just that but I think also attachments to the departments; I think if you're moving out of PhD or post doc and you're finding yourself with a gap, to be able to call yourself an 'Associate Researcher of the department of someone somewhere' makes a huge amount of difference, to talk at a conference, to give a paper, to send us our publication, you know, 'Independent Researcher', it doesn't cut it ... no, absolutely, I think those ties are essential (Expert 1)*

**e) All doctoral graduates should be allocated an academic mentor**

Likewise, the idea of appointing academic mentors was also viewed as a good idea, in principle. However, as with the one-year post-doctoral funding suggestion, there were caveats and concerns. Interviewees were keen that such a programme would be formalised in some way with time limits attached.

*...any mentoring programme I think has to be really targeted to specific goals and clearly structured, for instance, under the time constraints (so it doesn't go on forever), on the requests you can make, the amount of time that you can expect the mentor to offer, that kind of thing. (Expert 4)*

It was further suggested that training, both for the mentor in mentoring and the mentee in finding and selecting a suitable mentor, would be advantageous.

One interviewee suggested taking greater advantage of social media for mentoring, perhaps by setting this up via alumni networks, with online matching of academics with early career researchers for a pre-defined length of time:

*I think it needs to be done at the institutional, practically at the departmental level; that is, it could be institutional but departments would have to populate it. (Expert 4)*

However, some did express concerns over the amount of additional resources required to cover such an initiative:

*I think we struggle to have enough staff to mentor our junior staff anyway, so if you came into the University as a post doc, we'd like everyone to have a mentor, as well as their PI but we actually don't have enough senior staff who are there, ready to be mentors, so we're struggling to make that happen for all our existing staff. (Expert 3)*

**f) There should be training for doctoral supervisors related specifically to how best they can support their students in career development**

All agreed that, at least in principle, this was a good idea. However, for it to be effective there needs to be a fundamental culture change within higher education institutions and a shift in the role of supervisors. Many institutions already provided some form of training for supervisors but the main issue was encouraging some supervisors to take on board the messages.

*...with supervisors, the difficulty is getting them to pay attention to it, it's easier than it used to be, I think it is. I think as the younger people come into the academic sector, they've had different experiences themselves as doctoral students, to those which people had had previously and so they see the task differently, I think. (Expert 5)*

Some raised concerns that supervisors, while knowledgeable about academia, were not necessarily the best people to advise doctoral students on career progression, especially if this was outside the HE sector. There was also a concern that there could be a conflict of interests:

*I think supervisors are good at academic careers of course but I think, non-academic careers, you want better careers services; people with experience of being a researcher. (Expert 6)*

*I think there could be a conflict of interest here because I think one of the issues we have is that many researchers actually would like more information about alternatives to academia. I don't know whether PIs are the best placed people to do this. I do think PIs could be more informed about career options, etc., but I don't think they're the best people to give impartial advice. (Expert 8)*

## 7. Discussion of the findings

The survey and interviews present a snapshot at a particular point in time which will, however, be a useful baseline against which to compare future developments. Here we discuss the findings in sections 3 to 6.

### **The experiences and career trajectories of early career social scientists**

The survey and interviews described a wide diversity of experiences and career trajectories for doctoral graduates. Many participants in the study felt they had taken a unique and unconventional route to where they are now, indicating there is no longer a traditional, linear path into academia, let alone other employment sectors. Many had experienced (and in some cases were still experiencing) what might be termed a 'patchwork' or portfolio career. In some ways, this echoes the broader shifts in the higher education workforce (Locke, 2012, 2014) and the professions generally (Cooper, 2005).

This diversity can be summarised in the following list of key variables found among the survey respondents and those interviewed in the follow up:

- Different experiences of doctoral study, in a range of types of institution, with more or less supportive supervisors and departmental or institutional cultures and processes;
- Those who had taken a break at the end of their studies, through exhaustion or lack of opportunities to work in academia, and/or a career break in the years immediately following doctoral study, mainly for family or health reasons;
- Those who had previous careers in other professions and employment sectors and who decided they wished to move into academia by undertaking a doctorate;
- These and other mature doctoral graduates who may have family and other care and financial commitments, and who may not be mobile;
- Early career researchers who had studied or worked outside the UK, including those who had left the UK due to poor employment and career prospects.

It should be noted that even this description is likely to understate the diversity of the total population of early career researchers, given the relatively low numbers of respondents to the survey who were working outside academia.

Given the findings from this study, perhaps we should avoid thinking of early career researchers as a homogenous group pursuing a traditional linear path from undergraduate and masters study through postgraduate research, a post-doctoral position and into full-time permanent employment as a lecturer in higher education. Indeed, the inability to follow a linear path into academia seemed to be the source of considerable disappointment and frustration among participants. Moreover, the findings from this study suggest the need for broader definitions of 'early career researcher' that are not solely based on

the time elapsed since the award of a doctorate, but also on the competence and expertise of the researcher. Nearly half (48%) of the survey respondents had been awarded their doctorate four or more years previously and nearly a quarter (24%) six or more years previously. The achievement of a permanent academic position was mentioned by respondents but, as this could increasingly be in a teaching-focused role, even this is not sufficient as a marker in a research career. It would seem that successful experience as a principal investigator of an externally- (i.e. not university-) funded research project could be the significant factor that marks the transition from 'early' to 'mid'-career as a researcher (although, perhaps not yet 'senior'). A previous study of early career researchers in the arts and humanities similarly argued for a broader definition of 'early career researcher' (Renfrew & Green, 2014).

While most participants in the study had achieved a role in academia or other research environment, it was clear that, for the majority, it had taken between four to six years to attain a permanent or open-ended position which involved some kind of research. Until then, they had taken one, two or maybe more fixed-term contracts in order to gain the experience necessary to compete for permanent posts. This appears to confirm Auriol's (2010) finding that those with social science PhDs were more likely to be on part-time and fixed-term contracts initially, especially compared with physical and biomedical sciences and engineering. This relative precariousness is compounded by the long working hours and hyper-competitive culture that many participants found in higher education institutions, which was putting pressure on some in their early careers to take on unpaid work and remain mobile and willing to move to an institution in another part of the country.

There was a strong perception among survey respondents and interviewees that the period of 'apprenticeship' is lengthening, and this seemed to be having an impact on early career social scientists' personal lives, delaying decisions to settle in one place, buy a home, marry and start a family, for example. Some felt trapped in a 'Catch-22' situation, in which they could not apply for funding without a permanent post in a university, but were unlikely to be recruited to such a post without a track record of attracting research grants. Others had taken the decision to leave academia and work in other employment sectors – the public or voluntary sector, for example – whether deliberately, or because they could not find secure positions in higher education. Those who wished to re-enter academia at some point in the future were having to find ways of maintaining academic contacts, continue writing and publishing, and searching for research funding. From this study, it is not possible to confirm, or otherwise, the strong perception among ECRs and experts that early career researchers are taking longer to establish themselves in an academic career. However, as the generation of undergraduates from English institutions who have taken out student loans to cover annual tuition fees of £9,000 plus, as well as living costs, start to graduate, there are likely to be further shifts in these patterns and trends. The increased level of debt may cause some to delay their doctoral study, modify their choices of how – as well as what and where – they study, and influence their career decisions after the award of their doctorate (Mellors-Bourne *et al*, 2014).

Some participants (both in the survey responses and interviews), and even some experts, expressed the view that there are too many doctoral graduates for the number of academic posts available in the social sciences. However, this may reflect an assumption that academia is the primary destination for those with PhDs, ultimately, and that other kinds of employment do not require or utilise these high levels of knowledge and skills (Rudd, 1990). A small number of interviewees had not intended to start an academic career on commencement of their studies, but these were mainly those embarking on a second career. Some of the more mature participants in the study felt that experience, knowledge and skills gained outside of academia before undertaking a doctorate (for example, project management, applied research and public engagement) were not sufficiently acknowledged by research funders and reviewers of grant applications.

The perception of an over-supply of social sciences PhDs seems to be confirmed by the 35% increase in the number of doctoral degrees in these disciplines awarded during the REF2014 period (Else, 2015), totalling 22,006 (REF, 2015). The number of Category A staff in the social sciences with a contractual commitment to undertake research (full-time equivalent) submitted to the REF2014 was 14,413, a reduction of 430 on the 2008 RAE. Between these evaluation exercises, the number of social sciences academic staff expected to research increased by 2,850 or 9%, to 34,295 (HESA, 2009, 2015b). This may also account for the reports of an excess of supply over demand and the increasing competition for academic jobs made by so many of our survey respondents, interviewees and experts. Furthermore, in 2013/14, 31% of social science academics were on fixed-term contracts and 39% were in part-time positions. Clearly, in an environment that is increasingly competitive, precarious and insecure, those seeking to enter academia will need to be more pro-active and strategic in pursuit of this (Finkelstein, *et al*, 2015).

There appears to be a continuing gender imbalance among early career researchers in the social sciences in academia that favours men. The men who participated in the study were more likely to have been identified as future academic 'stars' and provided with individualised support in their career progress, included in bids for research grants and offered permanent academic posts. Women were more likely to regard themselves as early career researchers for longer, and to be on part-time and/or fixed-term, hourly-paid and zero hours contracts. This is confirmed by the HESA data and other sources of evidence (UCEA, 2015; UCU, unpublished). For example, in 2014/15, women made up 45% of the total number of academics, but 55% of those on part-time contracts; and 39% of female academics were on fixed-term contracts, compared with 34% of male academics (HESA, 2016b). Survey respondents and interviewees in the study reported a lack of transparency in promotion and recruitment processes and a lack of female mentors and role models in academia.

Women's careers are also more likely to be impacted by career breaks (for example, for maternity leave and for illness). In the hyper-competitive world of academia, any gap in publications, research income and academic interaction can be difficult to recover from. In a long-hours culture, being a parent and not able to work extra hours, restricts female (and some male) academics' ability to compete, relocate for a new job, attend international conferences and network actively. In some cases, reliance on a spouse's or partner's higher income due to low pay also restricts their ability to relocate for a new job. This study appears to confirm that gender inequality continues during the post-doctorate period.

### **The type and quality of support provided for early career social scientists**

Although survey respondents and interviewees reported a positive experience of the support provided during their doctoral studies, there were issues too. They remarked on the accessibility of this support, its continuation beyond submission of the thesis and even the award of the doctorate and, in particular, the role played by *individuals*, such as their supervisor and other academic colleagues, in this. However, there were many more who were critical of the level and type of *institutional* support on offer. Some were not aware of what was available, but others were only too well aware of what was *not* available but, they felt, should have been. Where it was available, this may have been for a limited duration, which might not even have included the period for 'writing up' a thesis. Or the support may not have been available remotely, if the doctoral student had to move away (including back to their home).

Many survey respondents and interviewees commented on the need to develop a more realistic understanding and accurate portrayal of the difficulties of forging an academic career. Some felt that, if they had known this, they would have given more consideration to career opportunities outside academia from the start. They appreciated the emphasis given by institutions and supervisors on completing the thesis within a reasonable timescale, but were also aware that they needed to develop in other areas, particularly in writing for publication, but also in academic networking and engaging with external communities – especially important in the social sciences – often through blogging and other forms of social media. Some also felt that the doctoral student community could be strengthened by the use of social media.

The key areas they sought support for during their doctoral studies, but many did not find, were:

- preparing applications for research funding in a highly competitive environment;
- publishing in high quality journals;
- networking with academic and policy communities;
- accurate and realistic information about the academic labour market;
- help with preparing CVs, job searches and applications;

- information, advice and guidance about work outside academia; and
- the development of transferable skills (such as team working, communications and problem-solving).

This last point echoes Morrison *et al's* (2011) and Purcell *et al's* (2006) findings that doctoral graduates did not feel their programmes had developed sufficiently the skills needed for either academic or other jobs.

Participants in the study also wanted continued affiliation to their doctoral institution beyond their registration as a student, for example, as an associate. Given the time it now takes to establish a career after a doctorate, this was thought likely to be needed for three years or longer. Affiliation would include an institutional email address, access to library resources – at least to those available online – and entitlement to careers information, advice and guidance, targeted at recent doctoral graduates. Many did not view their university's alumni network as an appropriate or useful place for continued affiliation, seeing the alumni office as largely a fund-raising operation, and so being reluctant to interact or retain contact with it.

A variety of support was available to study participants in their current academic institution if they were employed. The best examples included a full training programme appropriate to the individual's career stage and needs, discipline-specific departmental training and seminars, being allocated a mentor, funding to attend conferences and other networking opportunities, small grants for developing teaching, and the chance to take a postgraduate certificate in learning and teaching in higher education or academic practice. Several suggested the need for an established, senior academic mentor who would remain available after completion of the probationary period to provide continuing support as well as access to others' expertise, including contacts at other institutions and in other countries.

However, study participants reported variations in the time available to take up some of these opportunities. Those in postdoctoral positions dedicated to a particular research project, or on part-time and fixed-term contracts, had limited time to engage outside of their main sphere of activity or their set working hours. In addition, those on fixed-term contracts would have difficulty in participating in those activities that extended beyond their contracted period. Early career academics in specialised roles were also restricted, so that those in teaching-only roles would have little time to develop their research skills or undertake research, and those on research contracts would not have the time to participate in training to teach or even supervise doctoral students. This is reflected more broadly throughout the academic workforce, as shifts in roles and employment conditions disaggregate and fragment the core activities of teaching and research in higher education (Locke *et al*, 2016). Those working outside academia were less likely to have a structured support and training programme specifically aimed at the post-doctoral level or time to access one, if it existed. Some had found that support, advice and guidance from national research funders appeared to be 'off-limits' to those working outside academia.

The key areas that study participants sought support for once employed in an academic role, but did not find, were:

- more and better feedback on applications for research funding, and increased opportunities for redrafting and resubmission;
- tackling issues related to teaching, such as student recruitment, assessment of students' work, enhancing students' employability, and interpreting NSS results and other metrics (such as those proposed for the Teaching Excellence Framework);
- managing the limited time available for research, writing and publishing;
- training in research methods beyond their own specialism; and
- managing research projects and teams.

### **Funding opportunities and their impact**

Only a minority of respondents reported having had success in gaining postdoctoral research funding, and a quarter of them had not submitted an application for funding. Many felt there were barriers to applying for funding, either at the national level, in the rules and criteria of funding organisations, or at the institutional level, in the lack of advice and support and as a result of internal demand management practices. One common refrain was the raising of the bar, such that small grants were no longer available for modest research proposals. Another was the complexity and length of the application form, given the short duration between the call for applications and the deadline for submissions, together with the length of time taken to reach the final decision. Many interviewees felt that the FRL funding was not appropriate for early career researchers, being too large scale and complicated for their needs. With a lack of time to spare on writing applications and proposals due to their employment circumstances, many early career researchers felt they could only really be included in larger bids led by others. Moreover, funding opportunities that have relatively short time restrictions on how long after their PhD award an individual can apply no longer appear to align with the extended period that doctoral graduates are now taking to establish their careers.

Within institutions, it was felt that criteria had been introduced to exclude many early career researchers from applying as principal investigators or even being included as co-investigators in proposals. Again, the 'Catch-22' was cited, of not being able to apply if they were on a fixed-term or part-time contract, but not being considered for a permanent or open-ended position if they had no record of winning research income. Also, some reported a lack of guidance on applying, and limited, unhelpful or no feedback on draft proposals, which also appeared to be the case even if an application had been submitted to some national funding organisations.

Funding that is less than the 'full economic cost' of the research activities is now seen as problematic by most universities, as they have to find funds to subsidise these activities or even match the amount provided by the external source. It was felt by some participants in this study that any available funds for such subsidies would tend to be monopolised by established academics



on permanent or open-ended contracts and those who already have a track record of winning grants and being a principal investigator. Demand management processes within institutions were thought to exacerbate this. Applying for funding, even as a co-investigator had made the applicant eligible for submission to the 2014 Research Excellence Framework, but institutions appeared to be reluctant to make early career researchers who were not currently on research contracts eligible in this way.

### **Suggestions for improvement**

The foregoing discussion has already highlighted many proposals for improving the conditions and prospects for early career researchers in the social sciences. Participants in the study were very forthcoming in offering suggestions and detailed ideas for doctoral institutions, current employers and research funders. Of these, the most popular were for increased training in generic employment skills and competences and discipline-specific expertise, and for these to be integrated better and earlier into doctoral study programmes, as emphasised by the ESRC's new Postgraduate Training and Development Guidelines (ESRC, 2015b). This confirms previous findings in the studies of Morrison *et al* (2011) and Purcell *et al* (2006). Some felt that partnerships with companies, professional bodies and organisations outside academia could help to provide work experience in parallel with doctoral study. Given that many PhD students were working part-time anyway to support their studies, it was felt that work experience that could be relevant for a future career would be preferable to casual employment that is not.

Among the interviewees, there was a strong plea for more accurate and comprehensive information, advice and guidance on career opportunities and prospects outside academia. They sought information about a broader range of industries and employment sectors that are looking for people with PhDs. It was acknowledged that there are existing information sources, but that these are not co-ordinated, targeted at doctoral students or easily accessible. Some interviewees felt that universities should be providing this, perhaps in regional consortia to make such service efficient, economical and therefore more viable. Most of the expert interviewees felt that the Doctoral Training Centres would be the best vehicle for providing this, and that the ESRC should encourage this.

The ESRC uses its investment in DTCs – and the Doctoral Training Partnerships (DTPs) in future – to raise the standards of postgraduate training. Its 2015 Postgraduate Training Guidelines set out what will be expected and, to be accredited, a DTP will have to demonstrate it meets these expectations, and its performance will be monitored. The guidelines cover broader employability and transferrable skills training and the need for a robust training needs analysis. The evidence from this study suggests these efforts should be extended to include careers information, advice and guidance, and to extend this to cover those recently awarded doctorates.

There was a strong request for more information about academic career opportunities and the realities of seeking employment and working in higher education. For some, this went beyond simply providing information about the current situation, to how career paths for early career researchers might be restructured in order to facilitate their progression. This reflects discussions emerging from other higher education systems that have experienced high levels of 'casualisation' and 'patchwork' careers, such as Australia:

*If academic life is to be an attractive future career choice for clever and dedicated people, then it is necessary to be able to show them a realistic description of what becoming an academic means, coupled with a career structure that meets the reality and expectations of an increasingly diversifying workforce. (Coates and Goedegebuure, 2010: 2)*

Much of this restructuring of career pathways needs to be at the institutional level, given the diversity of the UK higher education sector. Efforts have already been made to develop alternative career tracks, for example, for those in primarily teaching or knowledge exchange roles, and to offer equitable reward and recognition for those on these pathways (Whitchurch and Gordon, 2013). However, such policies do not always translate into successful practices (Cashmore *et al*, 2013). There is potential for better use of system-level data to inform this process, for example, through detailed analysis of the statistics on higher education staff collected by the Higher Education Statistics Agency. Some respondents would also like to see more and better data from the ESRC, for example, on the profiles of the successful applicants to the Future Research Leaders scheme (and other funding schemes).

However, given the diversity of experiences among the survey respondents and interviewees, the perception of the lengthening in the time it takes to establish a career in academia and the precarious circumstances of many of them, this raises more fundamental questions about the adequacy of the traditional preparation for an academic career. There have been criticisms before of the narrowness and appropriateness of the PhD (for example, Scott *et al*, 2004; Park, 2007), but the current shifts in the structure and nature of academic work suggest the need for an even more profound 'redesign of the doctoral curriculum':

*It is likely that many people who enter the academic workforce will do things other than scholarly research in a specialised field. This may be stating the obvious, but to the extent that this is so, it is even more curious why the terminal qualification does not address such diversity ... To ensure that the PhD is designed to prepare people for the academic work of the future it would be helpful to enact the kind of 'redesign' logic outlined by Twigg (2010) to carefully analyse the nature of academic work...and backward map the results of this analysis to set desired outcomes from the doctoral degree. Defining outcomes makes it possible to map the 'doctoral curriculum', very broadly*

*conceived, and makes sure that the degree is training candidates in the ways that the profession needs. (Coates and Goedegebuure, 2012: 885)*

## 8. Conclusions

*I'm really glad to see the ESRC taking this on. The way that academic careers take shape has I think significantly changed - but institutional support (especially from universities) hasn't really changed with them. My feeling is that postdocs especially sometimes get a raw deal not because of any bad will on the part of institutions, or because people don't care - but because no one has figured out, and/or formalised, what responsibilities (especially in terms of career development) are actually owed to postdocs. I've seen lots of lip-service to e.g. instruments like the Concordat - but little actual desire for change. Pretty much every academic career now, in the social sciences, begins with three or so years of postdoc - so I think it's really crucial to sort this out. (Survey respondent)*

There is some evidence from the *Changing Academic Profession* study of an increase in the age at which academics (in all disciplines) in the UK obtain their first full-time employment in HE (Teichler and Cummings, 2015). This may be, in part, due to the increasing requirement for a doctoral degree, although the time taken to complete a doctorate appears to have shortened (Galaz-Fontes and Scott Metcalfe 2015). A 'lengthening in the apprenticeship' is found in many countries, reflecting fewer opportunities, less stable working conditions and less predictable career trajectories for those starting out in academia (Finkelstein *et al* 2015). New career paths have developed, but they do not always seem to offer the permanence and career progression that ECRs are seeking.

Some of these perceived shifts are only just emerging in the UK and are due to a range of factors, including changes in policy and funding – and, in particular, the Research Excellence Framework – greater competition between HEIs, the increasing influence of global rankings, and developing international markets for academics. However, national and institutional policies – and, particularly, institutional practices – have yet to catch up with these shifts. In an environment that is increasingly competitive, precarious and insecure, there is a strong perception that early career academics are taking longer to establish themselves and more doctoral graduates and postdoctoral researchers are falling by the wayside and eventually, reluctantly, abandoning academia, rather than initially and deliberately choosing a career outside academia. This perception should be tested through a longitudinal study of the experiences of early career social scientists, although the present study has provided a baseline against which to assess this.

Given the findings from this study, perhaps we should avoid thinking of early career researchers as a homogenous group pursuing a traditional linear path from undergraduate and masters study through postgraduate research, a post-doctoral position and into full-time permanent employment as a lecturer in higher education. Indeed, the inability to follow a linear path into academia seemed to be the source of considerable disappointment and frustration among participants. First, they are diverse in every sense: not least in age, previous experience, motivation, interests and personal circumstances. Social sciences doctoral graduates are also different to those in the physical sciences, although probably more similar to those in the arts and humanities (Renfrew & Green, 2014). Second, they are also more likely to be found in fixed-term, part-time and specialist (e.g. teaching-only and research) contracts for four years or more after their doctorate. This study has also confirmed the continuing inequalities between men and women, with female researchers more likely to remain in these more precarious positions with limited career prospects for longer, despite being in the majority.

The gender differences we found will need to be further analysed and contextualised than was possible in this short study. Nevertheless, they echo sector-wide data on academic staff on teaching and research and research-only contracts: women accounted for 42% of these staff in 2013/14 but only 37% of those on full-time, permanent or open-ended contracts. In the social sciences, 22% of female academics with a research role were on part-time contracts compared with 15% of male academics (HESA, 2015b). Furthermore, only 23% of all professors were women (26% in the social sciences), but the processes that lead to this imbalance would seem to begin early on in academics' careers. Our study indicates what appears to be a continuing gender imbalance among early career researchers in the social sciences in academia that favours men.

Consequently, self-definitions of an early career researcher varied depending on:

- whether respondents and interviewees still met the criteria for an early career researcher set by research funders;
- the time elapsed since the award of a doctorate;
- achievement of a permanent or open-ended full-time academic position which requires research, or even a minimum period of time in such a position;
- winning (external) research grant funding;
- becoming a principal investigator, especially of an externally-funded project; and
- whether the researcher was male.

All of these characteristics appeared to be helpful in building self-confidence as an autonomous and credible researcher. However, as one expert interviewee suggested, it might be a helpful clarification to identify a set of observable attributes and skills that would mark the transition from early to mid-career researcher in the social sciences. This would offer a more objective, neutral benchmark for everyone concerned and might help to

address the gender imbalance. It could include generic characteristics, appropriate for a wide range of working environments outside academia, as well as those that are specific to working in higher education. Ultimately, what early career researchers wanted to know was what they have to do to take their next step, to understand the career options, both inside and outside higher education and to have a realistic view of how to achieve their goals.

The findings from this study suggest the need for a new definition of 'early career researcher' that is not only based on the time elapsed since the award of a doctorate, but also on the competence and expertise of the researcher. The achievement of a permanent academic position was mentioned by respondents but, as this could increasingly be in a teaching-focused role, even this is not sufficient as a marker in a research career. A definition based as much on competence and expertise as on time elapsed would also help to address the gendered nature of self-definitions as an early career researcher. It would seem that successful experience as a principal investigator of an externally- (i.e. not university-) funded research project could be the significant factor that marks the transition from 'early' to 'mid'-career as a researcher (although, perhaps not yet 'senior').

One of the most critical dimensions of early career researchers' environment is funding, and the policies and practices surrounding it. The 'Catch-22' of only being able to bid for research funding if in a permanent post has been mentioned several times in this report. In addition, there is the hurdle of having to apply for larger sums for more ambitious research projects, which can be intimidating for less experienced researchers. These obstacles also apply to those who are working outside academia and wishing to move (or move back) to working in higher education. Perhaps, it should be possible for such researchers to submit an application for a short-term grant to pay for them to be employed one day a week in a university while they continue working the remaining four days in their non-academic employment. This would make it easier to return to academia by increasing their publications record and being in a better position to apply for academic posts. Such funding could also be very attractive to those on teaching-only roles, or working in third-space professions, within higher education that do not allow them to pursue their research.

The diversity among early career researchers and the perception of a 'lengthening of the apprenticeship' also prompted many respondents and interviewees to suggest that it is time to reconsider the traditional research doctorate as sufficient preparation for an academic career, let alone a career outside higher education. Indeed, many study participants challenged the assumption that a career outside academia is a failure. Among the interviewees, there was support for a more holistic, strategic and integrated approach to initial and continuing professional development for researchers. This training could start early, during doctoral study, and could focus on the skills and attributes needed in the work place – both within and outside the academy. It should be informed by an initial training needs analysis undertaken as part of the doctoral application, and updated throughout the period of study, as proposed for the Doctoral Training Partnerships. Doctoral

students could also be supported by their institution to draft and maintain an individual personal and career development plan with targets that extend beyond the doctorate. This could include objectives to be achieved in one, three and five years, and plans for after they are awarded their doctorate, and into their next stage of their career. Such planning should be flexible enough to accommodate the wide range of types of doctoral student, their institutional contexts and potential careers. This approach to professional development could be underpinned by a national or regionally-based academic careers observatory, along the lines of that provided by the European University Institute. Support for doctoral graduates should continue after award of their doctorate and opportunities for continuing professional development should be made more available to those employed on part-time and fixed-term academic contracts, including those not currently employed as researchers.

One way of achieving improvements in the experiences of, and support for, social science researchers would be for the Research Council to establish a doctoral 'quality mark' which embodies a code of best practice for doctoral institutions in supporting their doctoral students and those to whom they have recently awarded doctorates.

These might include, for doctoral students:

- opportunities to teach in higher education and to receive preparation and continuing support in teaching, enhancing learning and assessing students' work;
- advice and support for writing for publication and for publishing their doctoral research;
- advice and guidance on writing applications for research funding;
- opportunities to network with other researchers in their field of study;
- opportunities to enhance employability that are discipline-specific and built-in to the doctoral curriculum, rather than generic and bolted-on. These should develop doctoral students' capabilities for working outside higher education as well as in academia. They might include internships with public, business or civil society organisations;
- careers information, advice and guidance, targeted at doctoral students who seek an academic career and those who wish to work outside academia; and
- support in drafting and maintaining an individual development plan with targets that extend into their early career after the award of the doctorate.

For recent doctoral graduates, the 'quality mark' might require:

- continued affiliation to the institution beyond doctoral registration, for example, as an associate;
- an institutional email address, preferably the same address as during doctoral study rather than, for example, an alumni address;
- access to library resources – at least to those available online; and

- access to careers information, advice and guidance, targeted at recent doctoral graduates.

These facilities should be available to doctoral graduates for a minimum of three years and, preferably, up to five years after the award of their doctorate.

On the basis of the findings from this study and the foregoing discussion and conclusions, we offer the following recommendations. In addition to these, many survey respondents and interviewees mentioned the potential for alumni to mentor doctoral students and graduates. However, such mentoring schemes are complex and resource-intensive to establish and maintain, so we have not included this as a recommendation. We considered making recommendations for individual doctoral students, doctoral graduates and supervisors, but most of the problems identified in this study are structural and systemic rather than individual, and therefore require organisational and policy solutions that will achieve a cultural change for the individuals. However, individuals do have responsibilities for informing themselves, taking opportunities that are offered and being proactive in their professional development and career management. Enhancing employability is as much a priority for early career researchers and academics as it is for undergraduates, in the increasingly competitive employment market.

## 9. Recommendations

On the basis of the findings from this study and the foregoing discussion and conclusions, we offer the following recommendations.

### ***For the ESRC:***

1. Doctoral Training Centres and their successors, Doctoral Training Partnerships, should continue to play the leading role in developing, training and supporting early career researchers, both within their own institutions and through partnerships with other higher education institutions.
2. To build on the ESRC Postgraduate Training Guidelines and establish an ESRC doctoral 'quality mark' which embodies a code of best practice for doctoral institutions in supporting their doctoral students and those to whom they have recently awarded doctorates. The ESRC should encourage other research councils to consider adopting a similar scheme.
3. Where funding for a post in an HEI is from a research council, details of the planned provisional continuing professional development should be required in the proposal, personalised once an individual is appointed and subject to monitoring at completion of the award period.
4. To provide smaller-scale funding for early career researchers through a less time-consuming proposal process than the Future Research Leaders (FRL) scheme offers.

### ***For other higher education sector bodies in the UK, such as Vitae:***

5. To provide online information, advice and resources on professional development and careers for those doctoral graduates currently working outside higher education who may wish to work (or return to working) in academia.
6. As part of their *Researcher Development Framework*, Vitae to identify a set of observable attributes and skills that would mark the transition from early to mid-career researcher in the social sciences (and, potentially, other disciplinary areas).

### ***For universities with significant numbers of social science doctoral students:***

7. To provide initial preparation and continuing training and support for all doctoral supervisors, including briefing and online information on the opportunities and support available for doctoral students to teach, publish,



apply for research funding, network, enhance their employability and access careers information, advice and guidance.

8. To monitor the outcomes of internal decision-making about research funding by gender, ethnicity and age (for example, for small grants, internal-demand management, etc) and, where skewed, to take action, e.g. actively encouraging women and BME staff to apply, and enabling leading female and BME academics to provide guidance, etc.
9. To meet the ESRC's 'quality mark' for the provision of support for doctoral students and recent doctoral graduates. For the latter, these facilities to be available for a minimum of three years and, preferably, five years after the award of their doctorate.
10. It is not sufficient to simply make available training for doctoral students early in their studies, focusing on the skills and attributes needed in the work place – both within and outside the academy. This needs to be informed by a training needs analysis undertaken initially as part of the doctoral application, and updated at least annually throughout the period of study to seek to maximise the uptake of this training.

***For universities as employers of doctoral graduates:***

11. To provide a structured career development programme, regular appraisals and support for objective setting to be available to all early career academics. Where funding for a post is from a research council, details of the planned provisional continuing professional development to be included in the application, updated once an individual is appointed and subject to monitoring at completion of the award period.
12. To ensure that opportunities for continuing professional development should be made more available to those researchers employed on part-time and fixed-term academic contracts, and to recognise that not all early career researchers are currently in research roles.

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# Annex 1. Survey questionnaire

## ESRC Survey: Experiences and issues faced by early career social scientists

### Page 1: Overview

*Please note that your answers will be confidential with no identifying information passed on. Responses will be presented in aggregate form with text answers anonymised where necessary. You can withdraw from the study at any time. Your data will only be recorded if you complete the survey.*

The Economic and Social Research Council (ESRC) are interested to discover the experiences and issues faced by early-career social scientists. Therefore, they have commissioned this survey from researchers at the UCL Institute of Education to see how improvements can be made to existing support for early-career social scientists before, during and after their doctoral studies.

Early-career social scientists can be described in a variety of ways, for example, as those within eight years of the award of a doctorate. However, we do not want to use such a prescriptive definition as some people might describe themselves as an early-career social scientist despite having been awarded their doctorate more than eight years ago. Please note, we are not targeting *current* doctoral students.

Following the analysis of this survey, it is hoped to conduct a follow-up study involving interviews with selected early-career social scientists who are interested in participating. On the final page of this survey we will ask you if you are interested in participating in that qualitative study.

We do hope that you will complete the survey as your answers will help to improve the support for all researchers. We also hope that you will encourage anyone you know who is an early-career researcher in the social sciences and therefore eligible to participate, so please feel free to pass on the URL: **[bit.ly/ESRC-survey](https://bit.ly/ESRC-survey)**

The survey asks you about:

- Your motivations for doctoral study
- Your current employment and future aspirations
- Availability of career advice and guidance – and what you used
- Your education and personal information

The survey should take no more than **20 minutes** to complete. Not every question will be relevant to you. Where this is the case please leave blank.

**Page 2: Defining an early career researcher (ECR)**

1. Would you describe yourself as an Early Career Researcher?

Yes / No

1.a. Please outline the reasons for your answer [open]



**Page 3: Your motivations and aspirations**

2. What was your main motivation for deciding to study for a doctoral degree?

- My interest in the subject
- Improving my career prospects for an academic/research career
- Improving my career prospects outside of an academic/research career
- I was encouraged by a former academic tutor/supervisor
- The funding was available
- It felt like a natural step for me
- I felt inspired to work with a particular academic
- Other

2.a. If you selected Other, please specify: [open]

3. What were your career aspirations for when you had completed your doctorate, **before** studying, **during** studying, **after** your award and **now**? (Select all that apply)

	Before study	During study	Immediately after award	Now
3.1. Career in higher education - primarily research and teaching				
3.2. Career in higher education - primarily research				
3.3. Career in higher education - primarily teaching				
3.4. Other role in higher education				
3.5. Research career outside higher education				
3.6. Self-employment/running your own business				
3.7. Teaching career outside higher education				
3.8. Other				

3.a. If you selected 'Other' to any of the above, please specify. [open]

#### Page 4: Your Employment

4. Did you do any teaching at higher education level during your doctoral studies?

Yes / No

5. Immediately following the completion of your doctorate, what did you do?

- Paid work in higher education
- Unpaid work in higher education
- Paid work outside higher education
- Unpaid work outside education
- Travelled
- Other

5.a. If you selected Other, please specify: [open]

6. How long did it take you to secure your first paid post after submitting your thesis?

- Less than 3 months
- 3-6 months
- 6-12 months
- 1-2 years
- Over 2 years
- I've not yet secured a paid post
- I secured my first paid post before submitting

7. Which of the following best describes your first paid post?

- Role in higher education - primarily research and teaching
- Role in higher education - primarily research
- Role in higher education - primarily teaching
- Other role in higher education
- Research role outside higher education
- Self-employment / Running your own business
- Teaching career outside higher education
- Other occupation (please specify)
- I've not yet been able to secure a paid post

7.a. If you selected Other, please specify:

## Page 5: More employment

8. Which of the following have you done since **completing** your doctorate? (Select *all* that apply)

- Role in higher education - primarily research and teaching
- Role in higher education - primarily research
- Role in higher education - primarily teaching
- Other role in higher education
- Research role outside higher education
- Self-employment/running your own business
- Teaching career outside higher education
- Private sector employment
- Public sector employment
- Voluntary sector employment
- Employment in higher education outside the UK
- Employment outside higher education and outside the UK
- Other occupation (please specify)
- Further study for a qualification
- Been unemployed

8.a. If you selected Other, please specify: [open]

9. How would you best describe what you are primarily doing **now**?

- Role in higher education - primarily research and teaching
- Role in higher education - primarily research
- Role in higher education - primarily teaching
- Other role in higher education
- Research role outside higher education
- Self-employment/running your own business
- Teaching career outside higher education
- Private sector employment
- Public sector employment
- Voluntary sector employment
- Employment in higher education outside the UK
- Employment outside higher education and outside the UK
- Other occupation (please specify)
- Further study for a qualification
- Don't know
- Been unemployed

9.a. If you selected Other, please specify: [open]

10. How would you describe the nature of your current **main** employment status?

- Permanent or open-ended contract
- Fixed-term contract (12 months or more)
- Fixed-term contract (less than 12 months)
- Other

10.a. If you selected Other, please specify: [open]

11. What best describes your **main** employment or role?

- full-time
- part-time
- hourly-paid (fixed hours)
- hourly-paid (ad hoc hours, i.e. zero hours contract)
- unpaid
- other

11.a. If you selected Other, please specify:

11.b. If you answered part-time above, what is the percentage of a full-time post?  
[open]

12. How long have you been in your **current main** employment?

- Less than 6 months
- 6-12 months
- 1-2 years
- 2-4 years
- 4 years or more

## Page 6: More employment

13. How many **fixed term contracts** have you had since completing your doctorate?

0/ 1/ 2/ 3/ 4/ 5/ 6/ 7/ 8 or more

14. If you **are** working in higher education, how many contracts do you **currently** hold (including different roles at the same institution)

1/ 2/ 3/ 4/ 5 or more

15. If you are currently **not** working in Higher Education, what motivated you to seek employment elsewhere? [open]

15.a. If you are currently **not** working in Higher Education, would you like to move back into a higher education role at some point in your career?

Yes / No / Don't know

16. What is the job title of your current **main** employment? [open]

16.a. Who is the funder of your **current main** employment? (Please select *all* that apply)

- Education institution
- ESRC
- Other Research Council
- British Academy
- Government (central or local)
- NHS
- Research Institution
- Business
- Charity
- Other

16.a.i. If you selected 'Other' or 'Other Research Council' please specify the funder, type(s) of award(s) and the nature of your role(s) [open]

16.b. If **ESRC**, what is the nature of the award?

- Future Research Leaders
- Research Fellow on grant
- Co-investigator on grant
- More than one award
- Other

16.b.i. If you selected 'Other', or selected more than one award, please specify the type(s) of award(s) and the nature of your role(s): [open]

16.c. If **British Academy**, what is the nature of the award?

- Post-doctoral Fellow
- Small Grants
- British Academy Rising Star Engagement Awards
- Newton International Fellowship (NIF)
- More than one award
- Other

16.c.i. If you selected Other, please specify or selected more than one award, please specify the type(s) of award(s) and the nature of your role(s):

### **Page 7: A bit more employment**

17. Please list any **other current** employment (providing details of employer, job title and fraction of a full-time post and funding source if known). [open]

18. If you have **more than one** contract, please give the reasons why. [open]

19. On average how many hours a week do you spend on the following research activities (even if you are not currently working in higher education)?

19.1.a. Reading academic articles

19.2.a. Data collection

19.3.a. Writing up research

19.4.a. Writing bids / applying for research funding

19.5.a. Knowledge exchange (e.g. consultancy; collaboration with business, public and voluntary sectors, etc)

20. Are you expected to teach at higher education level in any of your **current** roles?

Yes / No

20.a. If **yes**, what percentage of your contracted time?

20.b. If **yes**, are you paid for an appropriate number of hours (including preparation and marking time)?

Yes / No

**Page 8: Employment ready**

21. To what extent do you agree that your doctoral studies proved an effective preparation for your '**Current**' employment and your '**Desired**' employment (if different)? *Please select only **ONE** answer in each column*

	Current	Desired
21.1. Strongly agree		
21.2. Agree		
21.3. Disagree		
21.4. Strongly disagree		

21.a. What could have improved your doctoral studies to make them a more effective preparation for employment? [open]

22. What do you consider to be the biggest barrier to achieving your chosen career (if applicable)? [open]

23. Postdoctoral funding applications

23.1.a. How many applications for funding for postdoctoral work have you made?

0/1/2/3/4/5/6/7/8 or more

23.2.a. How many of your applications for funding for postdoctoral work were approved for submission by your institution?

0/1/2/3/4/5/6/7/8 or more

23.3.a. How many of your applications for funding for postdoctoral work were funded?

0/1/2/3/4/5/6/7/8 or more

24. Are there any institutional barriers to postdoctoral researchers applying for funding?

Yes / No

24.a. If you answered **yes**, please outline those barriers [open]

25. If you have been employed **outside** the United Kingdom, please indicate country, employer, employment type and source of funding. [open]

**Page 9: Career breaks**

26. Since completing your doctorate, have you taken a career break (i.e. caring, parental leave, volunteering opportunity, travelling abroad, long-term illness etc)?

Yes / No

27. If you have taken a career break(s), how many years was it for in total?

1 year or less / 2 years / 3 years / 4 years / 5 years or more

28. If you have taken a career break(s), how long ago was the most recent?

Less than 1 year / 1-2 years / 2-4 years / 4 years or more

29. If you have taken a career break(s), please state your reasons why.[open]



**Page 10. Career support, advice and guidance**

30. Where have you sought career advice and guidance **before, during and after** doctoral study? (Select all that apply)

Before      During      After

30.1. Colleagues

30.2. Doctoral supervisor

30.3. Line manager

30.4. Careers service

30.5. Vitae

30.6. Research funders

30.7. Other

30.a. If you answered 'other' to any of the above please specify [open]

31. Which of the following kinds of support have you received?

	Your doctoral institution during doctorate	Your doctoral institution after doctorate	Your current main employer
31.1. Careers service			
31.2. Mentor			
31.3. Supervisor			
31.4. Access to the library			
31.5. Access to academic publications			
31.6. Institutional email address			
31.7. Access to training			
31.8. Office space			
31.9. Funding for conferences			
31.10. Funding for publication fees			
31.11. Support for funding applications			
31.12. Honorary affiliation with institution			
31.13. Other			

31.a. If you answered 'Other' to any of the above please specify [open]

**Page 11: Available support**

32. What support is available to you that is targeted at those who have a doctorate?  
 (Please select the **most appropriate** column for your situation)

	Working in Higher Education	Working outside Higher Education
32.1. Career development		
32.2. Careers outside academia		
32.3. Career within academia		
32.4. Publishing		
32.5. Mentoring		
32.6. Research management		
32.7. Writing funding proposal		
32.8. Writing job applications/covering letters/CVs		
32.9. Presenting at conferences		
32.10. Public engagement/knowledge exchange/media relations		
32.11. Networking		
32.12. Leadership		
32.13. Teaching (training)		
32.14. Teaching (qualification)		
32.15. Time management		
32.16. Other		

32.a. If you selected Other, please specify: [open]

33. What support would you like to have access to?

- Career development
- Careers outside academia
- Publishing
- Mentoring
- Research management
- Writing funding proposal
- Writing job applications/covering letters/CVs
- Presenting at conferences
- Public engagement/knowledge exchange/media relations
- Networking
- Leadership
- Teaching (training)
- Teaching (qualification)
- Time management

- Other

33.a. If you selected Other, please specify: [open]

34. Which support has been the **most** helpful / valuable and why? [open]

35. Which support has been the **least** helpful / valuable and why? [open]

36. Please detail any difficulties you have encountered accessing support, advice and guidance.

### **Page 12: Recommendations and future support**

37. What specific training during doctoral study would you recommend to someone else undertaking a similar doctoral path to you? (You may select more than one)

- Career development
- Careers outside academia
- Publishing
- Mentoring
- Research management
- Writing funding proposal
- Writing job applications/covering letters/CVs
- Job interviewing
- Presenting at conferences
- Public engagement/knowledge exchange/media relations
- Networking
- Leadership
- Teaching
- Time management
- Other

37.a. If you selected Other, please specify: [open]

**Page 13. Your education**

38. What type of school did you attend?

Fee-paid or Private / State

39. At what institution did you study for your **first** degree-level qualification? [open]

40. What was the subject area? (You may select more than one if multi-disciplinary)  
If none are appropriate please select 'Other' and specify the subject area.

- Accountancy
- Anthropology
- Business and management studies
- Economics
- Education
- Geography
- History
- Law
- Linguistics
- Media studies
- Politics and International Relations
- Psychology
- Sociology
- Social policy & administration
- Social work
- Town and country planning
- Other

40.a. If you selected Other, please specify, **or** enter the title here if none of the above are appropriate:

41. What was your overall classification?

1<sup>st</sup> / Upper second / Lower second / Third / Pass / Other

41.a. If you selected Other, please specify:

42. If you studied for any subsequent academic or non-academic qualification(s), please give the title(s) here, e.g. MSc Research Methods, PGCE. [open]

**Page 14: Your doctorate**

43. At what institution did you study for your doctorate? [open]

44. What type of doctorate do you have?

Research doctorate (i.e. PhD) / Professional doctorate / Practice-based doctorate

45. In what subject area did you study? (You may select more than one if multi-disciplinary)

- Accountancy
- Anthropology
- Business and management studies
- Economics
- Education
- Geography
- History
- Law
- Linguistics
- Media studies
- Politics and International Relations
- Psychology
- Sociology
- Social policy & administration
- Social work
- Town and country planning
- Other

45.a. If you selected Other, please specify:

46. How did you study for your doctorate?

Full-time / Part-time / A mix of full and part-time

47. Did you suspend your studies at any point?

Yes / No

47.a. If yes, please tell us why

48. How did you fund your doctoral studies? (You may select more than one response)

- ESRC
- BA
- Other Research Council (please specify below)
- Non-UK Government
- Charity (please specify below)
- Corporate
- Institution – full scholarship
- Institution – part-time work required (e.g. Graduate Teaching Assistant)
- Self-funded
- Other

48.a. If you selected Other, Other Research Council or Charity, please specify:  
[open]

49. In what year did you begin your doctorate? [open]

50. In what year was your doctorate awarded? [open]

## **Page 15: Your biographical details**

*Finally, we'd like to know some basic information about you. You are not required to answer these questions, but it will be very helpful if you do so that we can explore the relevance of these factors.*

51. What is your gender?

Male / Female / Other

52. How would you describe your ethnicity? [open]

53. In what year were you born? [open]

54. Do you consider yourself to be disabled?

Yes / No

55. Which category best describes you?

UK-British national / Other European Union / Non-European Union

56. Do you have any significant caring responsibilities (e.g. children, aged/ill relatives, etc.)?

Yes / No

57. If you have any final thoughts or comments, please enter them here.[open]

## Page 16: Next phase

Thank you very much for taking the time to complete this survey.

58. In the next phase of this study, we will be interviewing a number of respondents via telephone or Skype. If you are interested in participating, please enter your email address in the box below. [open]

59. In addition, the ESRC - and probably the British Academy - are keen to follow up with respondent's in future longitudinal research. To do so, they would like contact details for those willing to provide them. If you are happy to do so, please provide your **personal email** address and/or mobile phone number (since these are less likely to change than an institutional email) in the box below. [open]

Finally, if you know of anyone else who might like to complete the survey, please do pass on the web address: **[bit.ly/ESRC-survey](http://bit.ly/ESRC-survey)**



## Annex 2. Interview schedule for survey respondents

### Interview topics / questions (survey respondents):

#### *Preamble*

Thank you agreeing to take part in follow-up interviews and for signing and returning the consent form. By signing the form you have agreed to the interview being recorded. The research team would like to reiterate that all your answers will be confidential and that you have the right to withdraw at any time.

The purpose of the interview is to explore further some of the issues raised in the survey. The ESRC are particularly interested in your views and experiences around the support, advice and training available to early career social scientists and how this offer might be improved in the future. They are interested in those employed both inside and outside of academia and those that were ESRC funded as well as those that were not.

The interview should take no more than 30 minutes (**check interviewee understands and Switch on recorder**).

- 1) Please briefly outline how you got to this point after completing your doctorate, including what helped and what didn't.
- 2) Why do you consider yourself to be an early career researcher?
- 3) When will you stop considering yourself to be an early career researcher?

#### *Institutions of study:*

- 4) How would you describe the continuing support from the institution where you studied for your doctorate?
  - a. If you *have* received continuing support - what was its quality and usefulness? How easy was it to access – how did you know about it? How long will it be offered to you?
  - b. If you *have not* received continuing support why not? – Prompt: was it offered? Did you feel you didn't need it? – Can you explain why?
- 5) What support would you like to see such institutions offer early career social scientists and how long do you think it should last?
- 6) What *one* change would you recommend that such institutions make to support early career social scientists, working inside or outside of academia, in developing their careers?

- 7) Have you heard of the ESRC Doctoral Training Centres (DTCs)?
- a. **For those who have or have been attached to a DTC** - What advice and support have you received from the Doctoral Training Centres (DTCs)? – Prompt: If so what was the quality, access and usefulness?
  - b. **For those who have not heard of DTCs** - In common with other research councils the ESRC now uses Doctoral Training Centres (DTC) to host and manage their doctoral studentships. What do you think DTCs should focus on to help doctoral students with their career development both *during* and *after* their studies and why?

*Current place of employment:*

- 8) Is there a specific service offered by your **current employer** which provides support for early career social scientists? Prompt: If so, what is it, what is its quality, accessibility and usefulness?
- 9) How long after being awarded your doctorate do you think it is reasonable for your current employer to continue to provide advice, support, training and why?
- 10) Have you applied for funding at your current place of employment? If yes, how did it go? If not, why not?

*ESRC specific:*

- 11) What is your experience of ESRC funding for ECR; what worked or didn't; did it meet your needs?
- 12) What ESRC funding scheme do you think would provide the greatest support to early-career social scientists and why?
- i.e. Future Research leaders / Early career researcher / Postdoc fellowship scheme / 1 year postdoc funding for publications / Small grants / or something else
- 13) What **one** change / piece of advice / 'thing' - support or training - would you recommend the ESRC put in place to better support early career social scientists in developing their careers?
- 14) How long after being awarded your doctorate do you think it is reasonable for the **ESRC** to provide continuing advice, support, training and why?
- 15) What support, advice and training would you like to see in place from **employing institutions** for early career social scientists and why?

16) How would you describe where you are now in relation to your career aspirations when you initially started your doctorate? Prompt: why they are or are not where they wanted / expected to be.

*Studying and working abroad:*

17) Have you ever studied or worked abroad? If **yes**, what was the experience like / how did it compare to the UK?

18) If **no** why not? What have been the barriers – personal or professional? Would you have liked the opportunity to work or study abroad and why?

19) Is there anything else you would like to add

## **Annex 3. Topic guide for interviews with representatives from research organisations and other experts**

### **Feedback on key points from the survey (focus depends on interviewee):**

- The challenge of securing permanent research / lectureship posts in relation to funding applications and publications particularly.
- Defining ECR
- Too many graduates not enough posts; lack of preparation for non-HE careers (but recognition that non-HE careers are not motivator for doctoral study)
- Patchwork careers – low pay, post docs, multiple contracts etc
- Doctoral institution support – needed earlier, i.e. during the PhD. Also reality of the job market situation
- Experiences of applying for ESRC funding specifically.
- DTC awareness and use

### **Topics.** Response to the above namely:

1. What do you think are the needs of doctoral graduates in the social sciences?
2. What support, if any, does your organisation currently offer doctoral graduates in the social sciences?
3. How could your organisation better support doctoral graduates in the social sciences and how long should that provision last?
4. Where else – and in what form - do you think support for doctoral graduates in the social sciences should come from?
5. How could any such support for doctoral graduates in the social sciences be funded? Are there low cost solutions?
6. How do you see the situation of doctoral graduates in the social sciences progressing / developing in the next five years?
7. Do you think there are any particular issues for women?

### **Test possible solutions / some ideas that have come out of the research findings for improving support:**

- 1-year post-PhD completion funding (for converting thesis into publications, learning about research funding and bid-writing, etc)
- Should there be a National careers service – run regionally – established or an improvement to institutional career services for doctoral students

and ECRs working inside and outside of academia, to access, employability skills, ongoing discipline / academic training and support?

- ESRC to provide more support training or guidance centrally or via DTCs, e.g. guidance on applying for funding
- Continuing access to academic libraries and email accounts after leaving doctoral institution.
- Academic mentor.
- Training for supervisors on how to best support their PhD students in terms of career development - inside and outside of academia – during and for a defined period after completion.
- Greater clarification on who / what constitutes an ECR in what context (i.e. for funders, for HEIs etc etc)

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