

Review of the PhD in Social Sciences

Rapid Evidence Assessment

Executive summary of the interim report by CFE Research and University of York
for the ESRC Review of the PhD in Social Sciences

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Report authors:**For CFE Research:**

Dr Sarah Tazzyman
Dr Guy Birkin
Lindsey Bowes

For the University of York:

Dr Sally Hancock
Prof Paul Wakeling

For more information about this report please contact:
Sarah Tazzyman

Sarah.Tazzyman@cfe.org.uk

CFE Research
Phoenix Yard
Upper Brown Street
Leicester
LE1 5TE

0116 229 3300

www.cfe.org.uk

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Executive Summary

CFE Research, in partnership with the University of York, is undertaking a review of UK social sciences doctoral training provision on behalf of the ESRC. The findings will inform recommendations on potential new structures, funding and content for doctoral training provision to ensure it effectively equips graduates with the skills they need for a career within or outside academia. The review is addressing two overarching questions:

- What are the skills needed by social science PhD graduates to prepare them for careers both within and beyond academia?
- What are the optimum ways to develop these skills for a diverse student population while also safeguarding student health and well-being?

Aims and approach of the rapid evidence assessment (REA)

This rapid evidence assessment (REA) is the first stage in the review which will engage a wide range of stakeholders, including leading academics, PhD supervisors, students, graduates and employers. The REA will contribute to the achievement of the aims of the review by seeking to identify the skills that UK social science PhD graduates need to compete in a global economy and the relative effectiveness of different approaches to PhD training and support. The REA sets out to answer two research questions: *what PhDs in social science are* (in terms of structure, funding and assessment) and *what they do* (in terms of developing employability skills). This systematic REA of academic, peer-reviewed sources and 'grey literature' sources shows that there is limited robust data available, highlighting the importance of seeking to address these gaps through the various other elements of the review.

The REA method is systematic but focused. It prioritises academic and 'grey literature' relating to the social sciences, but also includes evidence relating to science, technology, engineering and mathematics (STEM), and arts and humanities. It includes examples of innovative practice and different models of provision that point towards positive outcomes, such as increased completion rates, improved mental health and wellbeing and successful progression to employment. It draws on evidence from the UK and three comparator countries: USA, Germany and The Netherlands. Evidence from Europe, China and the developed English-speaking world is also considered. There are, however, very few comparative studies available on the matters explored in this report. In total, 92 sources are included.

Key findings

Funding, teaching and assessment

- Most doctoral programmes in Europe are subsidised by public funding through government and research bodies. There is some evidence that **the approach to funding taken in different countries is diverging**. While some countries continue to publicly invest in higher education, others have

experienced a decline. Across our case-study countries, **doctoral study in the UK and the US is relatively high cost.**

- **Funding for doctoral programmes is underpinned by a complex set of arrangements.** Many of the mechanisms for funding doctoral programmes cross-cut national systems. There are also variations within, as well as across, countries.
- **Literature outlining specific teaching methods and modes of assessment for doctorates is limited.** It is likely that the specific methods of teaching PhDs are embedded within the curriculum at individual institutions and that there are high levels of variability across different disciplines and doctoral pathways. The lack of evidence on teaching methods in social science doctorates constitutes a gap in current knowledge that will be explored through primary data collection with students, graduates and supervisors as part of the current review.
- Group working is rarely found in social sciences doctorates, which can result in candidates feeling isolated. **Structured cohort programmes**, which have traditionally been associated with US doctoral programmes, are reviewed favourably in the literature for remedying isolation. They are also recognised for improving completion rates and decreasing pressure on students, supervisors, administrators and academics. The success of cohort programmes is, however, likely to strongly depend on the local context in terms of research culture and funding structures.
- **Collaborative doctoral training models**, involving universities and external partners, **are increasing both internationally and in the UK.** Collaborative doctoral training programmes often involve coursework and internships or placements, with research projects directed to meeting the needs of both academic and external partners. However, it is surprising that **many of the ‘extra’ competences that funders and employers value are not formally assessed during doctoral training.**
- The evidence on doctoral assessment is more abundant than that on teaching methods. A varied range of approaches to assessing the PhD are uncovered, including differing understandings of ‘originality’ and a ‘contribution to knowledge’. There is, however, **minimal evidence about the relative effectiveness of different doctoral assessment methods** both within and between countries. Small-scale studies have considered student and supervisor perspectives on assessment, but these are typically not generalisable.
- **A disconnect between the skills and competences that doctoral candidates need and mode of assessment is also evident.** Doctoral assessment, together with the extent to which this is fit for purpose to assess the required skills of doctoral candidates, will be further explored through the survey and depth-interviews with students and graduates and interviews with supervisors. **Selection processes used to recruit PhD examiners may also differ** and call into question the objectivity of this process which may, in

turn, impact on the assessment experience. Field work with supervisors will seek to explore this in more depth.

Completion time and rate

- There are few explicit comparisons of programme length in recent scholarship on doctoral study. While the norm for countries that have adopted the Bologna system of standardising higher-education qualifications is three years full time, in practice this varies from country to country and often within country, depending on funding arrangements.¹ Across our case-study countries, **considerable variation in the length of doctoral study is observed.**
- A consistent finding internationally is that **actual completion times are, on average, longer than expected completion times.** In all of the literature reviewed, concerns about completion rates and lengthening times to completion were prominent. Attrition and lengthening times to completion are commonly associated with poor student satisfaction and wellbeing. We found no examples of calls for the length of doctoral training to be increased. The recent innovations by some UK funders to slightly lengthen the funding period for their students should be understood in the context of **the UK being at the shortest end of the international distribution** of length of doctoral programme.
- Completion rates also vary across countries. The UK is one of a set of countries with doctoral completion rates of around 75%. Considering both average duration and completion rates, the **UK PhD certainly looks efficient by international standards.**

Inclusion, diversity and wellbeing

- Questions of inclusion and diversity, and of the mental health and wellbeing of doctoral researchers, have risen to prominence in recent public debate within higher education. There is **prima facie evidence of a lack of diversity and unequal access** to doctoral education for certain disadvantaged groups. There is also evidence of **significant numbers of doctoral students reporting poor mental health.**
- There are **concerning indicators of poorer than average mental health** for those on doctoral programmes. However, there is scant evidence on causality and on the effectiveness of interventions, and it is not clear to what extent social science doctoral candidates are particularly affected. Based on current evidence, it is not possible to recommend changes to the structure of the social science PhD to address mental health and wellbeing concerns.

¹ The Bologna Process, launched in 1999, aims to standardise educational qualifications across Europe. With regard to higher education, the Bologna model stipulates a '3+2+3' duration for bachelor's, master's and doctoral degrees, meaning the master's and doctoral phase are five years in total.

These issues will be explored further through the primary research to help address gaps in the knowledge base.

- Although there is growing evidence about the extent of **inequalities by gender, ethnicity and socio-economic background** at doctoral level, there is no systematic comparative scholarship on how diversity and inclusion are affected by the form of doctoral education. At earlier educational levels, the form and structure of educational systems are found to have relatively little impact on educational inequalities.
- The **mechanisms by which inequalities in access to doctoral study arise are under-researched**. There are significant shortcomings in available data for understanding trajectories into, through and beyond doctoral study. As such, it is not possible to know whether graduates from certain backgrounds do not apply for doctoral study in the first place, or rather that they do but are not successful in their applications.
- There is also a **paucity of evidence on the efficacy of interventions to improve inclusion and diversity at doctoral level**. In fact, to the best of our knowledge, there are very few such initiatives in existence in the UK, and those which do exist are at too early a stage for evaluation.

Skills and employability

- Many of the studies examining **doctoral skills and employability** are responding to a context of global expansion. Across all fields, PhD holders are **increasingly finding work in non-academic sectors**. These developments have prompted debate around the purpose of the contemporary doctorate, and whether training sufficiently prepares students for their diverse futures.
- The expansion of doctoral education has heralded **a multiplication of stakeholders to the PhD**, each of which bring unique and, at times, contradictory views of its value and purpose.
- Approaches to reforming doctoral education with a view to better preparing students for non-academic careers are divergent across Europe. In the UK, social science training policies have frequently followed a **‘science’ model** focused on cohort building and transferable skills training. Encouraging collaboration with non-academic partners, and inter-disciplinarity, have also been prioritised in the UK and in other European countries.
- While there is evidence that transferable skills are enhanced during the doctorate, **formal training courses are not always positively received** by students. Courses are often characterised as generic, lacking disciplinary relevance, time-consuming, of poor quality and lacking supervisor support.
- In the UK and internationally, **a higher proportion of social scientists remain in academia compared to other subject areas**. Nevertheless, the number of graduates entering non-academic careers is considerable, and

their needs – as well of those of employers – are the subject of extensive debate.

- Across several national contexts and disciplinary fields, **doctoral training is perceived as less useful by graduates entering non-academic employment**. A stronger articulation of the value of doctoral training to the broader economy may enhance the attractiveness of non-academic roles. Longitudinal data on doctoral careers, across all disciplines and nations, is not collected.
- Direct research with employers is limited, but it appears that while the skills of social science PhD students are valued, the PhD qualification itself is rarely sought. The **skills sought by employers varied by occupational sector**: academic employers valued **critical thinking** and skills in the interpretation and presentation **of quantitative and qualitative data**; while non-academic employers valued critical thinking, and the ability to **specify research problems** and apply a range of methods and tools.
- A number of studies with social science graduates and employers suggest that skills in **teamwork, communication, inter-disciplinarity, project management and leadership could be enhanced** during doctoral training in order to better equip graduates for a career in the non-academic sector.
- Opportunities to enhance training to better prepare social science graduates and meet employer needs may be found through enhanced collaborative programmes, which may develop from the existing contacts of students. There is consensus that **transferable skills training ought to be more firmly embedded into doctoral projects and disciplinary cultures**; and that training should be informed by **individual needs analyses** which are regularly reviewed. Follow-up interviews with students, graduates and supervisors could also explore whether **doctoral assessment** might better incorporate the development of skills beyond academic subject expertise.