

Society for Research into Higher Education

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**Enhancing induction of postgraduate research
students**

**The context; change and complexity in
doctoral education in the 21st century**

Introduction

Until relatively recently, as McWilliam and James (2002: 117) have written:

....the achievement of a doctoral degree was a somewhat rarified and mysterious endeavour. Doctoral education was conducted behind closed doors in spaces remote from either undergraduate teaching or the world of commerce and industry. Its pedagogy has been characterised by some – perhaps unfairly – as one in which the precocious few were called to emulate the master as scholar.

But, and particularly over the past two decades, this traditional context has been transformed by a number of key changes. Taylor (2009) has outlined these as below:

- massification;
- globalisation;
- diversification;
- commodification;
- McDonaldisation;
- regulation;
- capitalisation;
- multiplication.

Massification

Up to a few years ago, as Joyner (2003: 123) has put it:

...very few people, mostly of high attainment and motivation, undertook research degrees..

But, and across the globe, over the past two decades the numbers registering for doctoral programmes in most countries has increased very substantially (see Sadak (ed.) 2004, Powell and Green 2007). The causes of this development probably lie in two main factors.

The first was the shift in many countries from an elite to a mass system of higher education at the undergraduate and taught postgraduate levels. On the one hand, the fact that there were many more people with undergraduate or Master's degrees increased the numbers who were eligible to undertake doctoral programmes; on the other, the fact that these lower degrees had become relatively common increased the cachet associated with the doctorate and gave it an edge in terms of status and possibly qualifications in the labour market.

So the number of research students has been growing at a rapid rate. In the UK, for example, in 1997 there were just over 40,000 research students but by 2007 the total had reached 119,000.

Internationalisation

The second trend has been the internationalisation of doctoral education in the sense of students studying for their doctorates in a country other than that of their origin. While there is nothing new in this in principle – for example in the 19th century both US and UK chemists did their doctoral studies in Germany (Simpson, 1983) – what has changed very rapidly in recent years is the sheer scale of movement to study abroad for doctorates, particularly of course in the US, UK, Oceania, and Western Europe. The reasons for this are many and varied, but they include the very rapid growth of undergraduate education in developing countries coupled with a lack of capacity for postgraduate education, which has

led both governments and the emerging middle classes to send graduates abroad to do research degrees (see for example Zhao 2003, Mogeruon 2005). In other cases, research students are staying at home, but studying for degrees with foreign universities. As a consequence, significant proportions of doctoral students are now from other countries, including 45% of UK research students, 25% of those in France, 23% in South Africa, 21% in Canada, 20% in Australia, and 14% in the USA (Powell and Green 2005).

Diversification

Moreover, this expansion in numbers has been associated with an increase in the diversity of the domestic graduate population. Domestic students have a broader range of academic and social backgrounds than their counterparts of a few years ago, and many have little or no prior experience of supervision or of operating in research mode. as Yeatman (cited Johnson et al. (2000: 137) has put it:

...many supervisees are barely socialised into the demands and rigours of an academic scholarly and research culture. It is especially inadequate to the needs of many PhD aspirants who, by historic cultural positioning, have not been invited to imagine themselves as subjects of genius. These include all those who have been marginalised by the academic scholarly culture; women, and men and women from the non-dominant class, ethnic or race positions.

A further major aspect of diversity has been the growth of part-time students. The model of the undergraduate or postgraduate coming forward to do a research degree a few years ago was one who has just completed a first degree and who had come straight, or in some cases via a Master's, onto a research degree programme. He or she would probably have been supported in their previous studies by a grant, and been reasonably well-off. State supported research studentships were relatively plentiful, and while stipends were not high, they were adequate.

While this remains the case in many of the sciences, outside those disciplines the student coming forward today is likely to have perhaps wanted to do research after a first degree but have been unable to do so because of a combination of the burden of debt and/or the paucity of funding for research studentships, now reserved not just for Firsts but for top Firsts. He or she is likely to have been in employment for several years, have a family, and be working to support themselves during their studies.

Allied to that, of course, many are studying predominantly off-campus, both in the UK and overseas, i.e. they are taking their doctorates by distance learning (see Pearson and Ford, 1997, Macauley, 2000).

Commodification

In the quote that started off this part of the workshop, the traditional system was described as one in which as one in which 'the precocious few were called to emulate the master as scholar.' But while, within the precocious few, many were called, by no means all succeeded; when, in the late 20th century, the first studies were undertaken of completion rates among doctoral students (see for example Blaume and Amsterdamsaka, 1987; Winfield, 1987; Bowen and Rudenstein, 1992; Leonard, 2000; Colebatch, 2002; McAlpine and Weiss, 2000), they indicated that many, in fact a half or more, fell by the wayside. Such attrition was largely blamed upon students who were not up to work at the highest level, not just by institutions and supervisors, but by students themselves. So even students who had clearly had a raw deal from their supervisors often expected no more, as in the example below.

Example

Morley et al. (2002: 263) report one former student's comments about:

'...the sad experience that I went through in the 1980s when I undertook a part-time PhD..I had little contact with my supervisor, except when I sent him draft chapters and he gave me (limited) feedback on them...I got fed up with it after about four years, but was encouraged to continue – with the implication that it was OK. I completed and had a viva without any preparation or information about what to expect. The only thing I remember about the viva was the external examiner asked why I had included such a long appendix...I was awarded an MPhil without any feedback as to why – my supervisor never made any further contact with me (ever)...I didn't know of any appeal procedure...'

But, in the same way as undergraduate and taught postgraduate education has been fashioned by neo-liberal government policies into a 'provider-consumer' framework, so has doctoral education. So, for example, in the UK, such a framework is provided by Section 1 of the QAA Code of Practice (2004) for the assurance of academic quality and standards in higher education, which contains in all 27 Precepts covering every aspect of research degrees from recruitment to examination.

Reflecting this shift, the often highly indebted, paying and often mature students of today now expect their supervisors to offer a service in supporting their research (see for example Grant 2005, Dann 2008). If the latter goes wrong or falls behind schedule, they are much more likely to look towards their supervisor for assistance. If this is deemed to be inadequate, they are more likely to complain, demand a change of supervisor, use institutional complaints procedures or, in extreme cases, even resort to the courts.

McDonaldisation

Again historically, many non-commercial research sponsors of research students took a fairly relaxed attitude to completion and submission rates. Indeed, in some disciplines, only a minority of students completed within a decade of beginning their studies and a large number never submitted.

But, since the mid-1980s, such sponsors have been taking a much more businesslike approach (see Ketteridge and Shiach 2009). They have insisted that a high proportion of students complete and submit within three or at most four years of full-time study, and have penalised Departments which have not met these targets. Currently the targets of the major UK research councils are:

Research Council	% target for submission within four years	% sanctions applied at:
AHRC	70	Less than 70
BBSRC	70	Less than 70
EPSRC	80	None
ESRC	75	Less than 75
MRC	70	None

While the above only apply to Research Council-funded students, in 2005, the Higher Education Funding Council for England started publishing qualification rates across the sector and these were followed in 2007 by compilations of the first league tables. All of these targets are ramping up the pressures on supervisors to ensure that students get through within the allotted time.

Regulation

Even a decade ago, many institutions took very little if any interest in research supervision. This was largely on the ground that the relationship between the research supervisor and the research student was necessarily a private one between consenting adults and hence that any intrusion would be unwelcome and inappropriate.

However, variously because of the higher expectations of students (and their greater willingness to turn to the law for recourse), the drive of the research councils to improve completion rates, and periodic audit of adherence to the QAA Code of Practice, institutions have been forced to take responsibility for the quality of supervision offered by their staff. In consequence, all have had to develop internal codes of practice covering matters including supervision, and to monitor their effectiveness (see Ketteridge and Shiach 2009).

Capitalisation

Historically again, the primary purpose of the doctorate has been to reproduce the academic workforce, i.e. to train new generations of researchers for the universities. However, a combination of a static or declining supply of permanent academic posts and increasing comparative advantage in non-academic employment has curtailed this justification of devoting resources to doctoral education, and led to a search for alternatives.

One that has been widely advanced is that doctoral graduates have a key part to play as frontline workers in the so-called 'knowledge economies' (see Usher 2002), and that the function of PhDs is to supply human capital for the knowledge economies. However, there has been some scepticism about whether at least the traditional PhD could be described as an adequate preparation for such a role. As Taylor and Beasley (2005: 11-12) have put the matter:

The traditional PhD was, it was argued, aimed at producing researchers in the so-called Mode 1 of knowledge production, i.e. academic subject specialists who would conduct the search for knowledge for its own sake in line with the traditional academic values of truth, objectivity, and universality. But what was needed in the knowledge economies of the future was researchers trained in the so-called Mode 2 of knowledge production, i.e. researchers inside or outside academia who were able to spot commercial opportunities for the application and exploitation of research, bring expertise to bear upon research problems, effectively manage research projects, and place and market the final product. In a nutshell, the traditional PhD was about producing academics, but the new knowledge economy required research entrepreneurs.

In response to such arguments, the Joint Research Councils (2001) have effectively extended the purposes of doctoral studies to incorporate both generic employment and knowledge-economy specific skills, and insisted that these form part of the research training of all research students whom they fund. The detailed list of skills is to be found at http://www.bbsrc.ac.uk/funding/training/skill_train_req.pdf.

So the traditional PhD has been developed away from being a proving ground for academics to promoting employability in general and employability in the knowledge economy in particular.

Multiplication

The same 'knowledge economy' driver that have promoted adaptation of the PhD have also been associated with the development of other forms of doctoral degrees, including of course professional doctorates.

Professional doctorates may be said to have four main characteristics distinguishing them from the traditional PhD. Firstly, they are undertaken predominantly, if not exclusively, by practising professionals in a vocation relevant to the field of study. Secondly, they involve a significant taught component, which of course is a feature of the United States model of doctoral education but an innovation in the European one. Thirdly, and crucially, the research project usually relates to the professional practice of the student and is undertaken in the workplace. Fourthly, the thesis is normally shorter in length than that for a traditional PhD and expected to be useful as well as original, i.e. address issues of professional practice and solve practical problems in ways that will benefit practitioners, clients, and organisations.

Such doctorates are, in fact, hardly new, for most of the 20th century these degrees were far overshadowed by, and in many cases regarded as inferior to, the traditional PhD. However, in the late 1980s there was a re-evaluation of professional doctorates because, unlike the traditional PhD, they met the canons of employability (students were often already in employment) and entrepreneurship (developing and marketing solutions to work-based and professional problems). In consequence, professional doctorates began to enjoy a new popularity, and there are now several hundred available in the UK.

In addition to professional doctorates, there are of course also other new types which have been developed, including both practice- and project based doctorates (see for example Green and Powell 2005).

References

- Blaume, S. and Amsterdamsaka, O. (1987) *Postgraduate Education in the 1980s*. Paris: Organisation for Economic Co-operation and Development.
- Bowen, W. G. and Rudenstein, N.L. (1992). *In Pursuit of the PhD*. New Jersey: Princeton University Press.
- Clark, B. (1993) *The Research Foundations of Postgraduate Education: Germany, Britain, France, the United States and Japan*. Berkeley: University of California Press.
- Colebatch, H. (2002). Through a Glass Darkly: policy development on higher degree completions in Australia. *Journal of Higher Education Policy and Management*, 24(1): 27-35.
- Dann, S. (2008) Applying services marketing principles to postgraduate supervision. *Quality Assurance in Education*, 16(4): 333-46.
- Grant, B. (2005) Fighting for space in supervision: fantasies, fairytales, fictions and fallacies. *International Journal of Qualitative Studies in Education*, 18(3): 337-54
- Green, H. and Powell, S. (2005) *Doctoral Study in Contemporary Higher Education*. Buckingham: Open University Press.
- Higher Education Funding Council for England (2005) *PhD research degrees: entry and completion*. Bristol: Higher Education Funding Council for England.

- Higher Education Funding Council for England (2007) *Research degree qualification rates*. Bristol: Higher Education Funding Council for England.
- Joint Research Councils and Arts and Humanities Research Board (2001) *Skills training requirements for research students: joint statement by the Research Councils and Arts and Humanities Research Board*. Available on-line at <http://www.vitae.ac.uk/cms/files/RCUK-Joint-Skills-Statement-2001.pdf> Accessed 28th June 2010.
- Joyner, R. (2003) The selection of external examiners for research degrees. *Quality in Higher Education*, 11(2): 123-27.
- Ketteridge, S. and Shiach, M. (2009) Supervising research students. In H.Fry, S.Ketteridge, and S. Marshall (eds.) *A Handbook for Teaching and Learning in Higher Education*. 3rd Edition. London, Routledge.
- Leonard, D. (2000) Transforming doctoral studies: competencies and artistry. *Higher Education in Europe*, XXV(2): 181-92.
- Macauley, P. (2000). Pedagogic Continuity in Doctoral Supervision: Passing on, or Passing by, of Information Skills. In M. Kiley & G. Mullins (eds.), *Quality in Postgraduate Research: Making Ends Meet*. Adelaide: Advisory Centre for University Education, the University of Adelaide.
- McAlpine, L. and J. Weiss (2000). Mostly true confessions: joint meaning making about the thesis journey. *Canadian Journal of Higher Education*, XXX(1): 1- 26.
- McWilliam, E. (2004) *On being accountable: Risk-consciousness and the doctoral supervisor*. Paper submitted for full refereeing for the Australian Association for Research in Education Conference, Melbourne 28th November- 2nd December 2004. Available on line at <http://www.aare.edu.au/04pap/mcw04267.pdf>. Accessed 28th June 2010.
- McWilliam, E. and R. James (2002) Doctoral Education in a Knowledge Economy. *Higher Education Research and Development* 21(2): 117-20.
- Mogueron, P. (2005) Doctoral and Postdoctoral Education in Science and Engineering: Europe in the international competition. *European Journal of Education*, 40(4): 367-92.
- Morley, L., Leonard, D., & David, M. (2002). Variations in Vivas; quality and equality in British PhD assessments. *Studies in Higher Education*, 37(3), 263-73.
- OECD (Organisation for Economic Co-operation and Development)(1998). *University Research in Transition*. Paris: Organisation for Economic Co-operation and Development.
- Parry, S. (2007) *Disciplines and Doctorates*. Dordrecht, Springer.
- Pearson, M. and Brew, A. (2002) Research Training and Supervision Development, *Studies in Higher Education*, 27(2): 138-43
- Pearson, M. and Ford, L.(1997) *Open and Flexible PhD Study and Research*. Canberra, Department of Employment, Training and Youth Affairs.
- Powell, S. and Green, H. (2007) *The Doctorate World Wide*. Buckingham. Society for Research into Higher Education and Open University Press.
- Quality Assurance Agency (2004) *Code of Practice for the Assurance of Academic Quality and Standards in Higher Education: Postgraduate Research Degrees*. Gloucester, Quality Assurance Agency.
- Quality Assurance Agency for Higher Education (2007) *Report on the review of research degree programmes: England and Northern Ireland*. Gloucester, Quality Assurance Agency.
- Rudd, E. (1985) *A New Look at Postgraduate Failure*. London: Society for Research into Higher Education and National Foundation for Educational Research. London, Nelson.
- Sadak, J. (2004) *Doctoral Studies and Qualifications in Europe and the United States*. UNESCO Studies in Higher Education. Available on-line at <http://unesdoc.unesco.org/images/0013/001364/136456e.pdf> Accessed 28th June 2010.

- Smeby, J.-C. (2000) Disciplinary Differences in Norwegian Graduate Education. *Studies in Higher Education*, 25(1): 54-67.
- Taylor, S. (2009) The Post-Humboldtian Doctorate: Implications for Supervisory Practice. in V.King, F.Deepwell, L. Clouder, L. and C. Broughan (eds.) *Academic Futures: Inquiries into Higher Education and Pedagogy*. Cambridge, Cambridge Scholars Publishing.
- Taylor, S. and Beasley, N. (2005) *A Handbook for Doctoral Supervisors*. London, RoutledgeFalmer.
- Usher, R. (2002) A Diversity of Doctorates: fitness for the knowledge economy? *Higher Education Research and Development*, 21(2): 143-53.
- Williams, B. (2000) Australian Universities 1939-1999: How Different Now? *Higher Education Quarterly*, 54(2): 147-65.
- Winfield, G. (1987). *The Social Science PhD: The ESRC Enquiry into Submission Rates*. London: Economic and Social Research Council.
- Zhao, F (2003) Transforming Quality in Research Supervision: a knowledge-management approach. *Quality in Higher Education*, 9(2): 187-99.