

## The future of knowledge generation (0175)

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### **Abstract**

Both nationally and internationally ideas about the values and purposes of doctoral education are changing. There is a range of drivers for this, including the development of knowledge economies globally and the attendant need to prepare more knowledge workers to sustain and extend scientific and other advances. These changes provide a context within which a more diverse group of stakeholders take an interest in doctoral education, and to consider the structure, content and pedagogies that can prepare candidates for the different roles they may undertake in society. Recent discussion on 'doctorateness' that attempt to define what a doctorate is for have considered some of the pertinent issues, but this paper argues that more needs to be done to understand stakeholders' views, and how they might influence research, researcher development, supervisors and supervisor development programmes. There are increasing challenges for those supervising doctoral research, and this paper intends to focus discussion on if those preparing supervisors need to convey a wide ranging understanding of the issues involved.

### **Paper**

Globalisation and the need for high level workers to support the knowledge economy have resulted in the increase of doctoral students and a diversification of doctorates. Society and states across the globe are requiring economic growth and a return on investment (Jorgenson, 2012; McAlpine & Norton, 2009), and doctoral programmes that will develop the knowledge economy (Fink, 2006). International students constitute a significant number of registrations in the United Kingdom, with figures from HESA (2014) estimating that one in eight students enrolled in UK higher education institutions is from outside the EU. Increased numbers of doctoral candidates are therefore supplying the demand for more knowledge workers to sustain and develop an increasingly technical and professionalised workforce.

This context means that a more diverse group of stakeholders have an interest in doctoral education. Park (2007) suggested that there are 8 broad categories of stakeholder in doctoral education: students; supervisors; academic departments; institutions; disciplines; funding bodies; employers; and the nation. To these, we might add further categories, namely organisations interested in global development such as the Organisation for Economic Cooperation and Development (OECD); sub global organisations like the European Universities' Association (EUA) Council for Doctorate Education (CDE); and bodies with an interest in utilising doctoral knowledge and expertise in specific areas, for example professional bodies in health, teaching, the law and so on. Park suggests that key drivers of change to the UK doctorate impacting on stakeholder perspectives are: sustaining the supply chain of researchers; preparation for employment; and internationalisation (p13).

Tracking the influence of these various stakeholders is difficult, as is considering the relative importance of their agendas. Nerad (2014) suggests that there has been an increasing influence of governments and employers worldwide in doctoral education which is a central factor in 'a rapidly growing international movement to standardise quality assurance in research doctoral education' (p111). Clearly quality is important, and organisations like VITAE that support researcher development in the UK have been significant in providing a framework of capabilities that many universities have utilised to support their doctoral development programmes. Also organisations like the European Charter for Researchers (2015) specify that researchers at all career stages should constantly improve themselves by updating and expanding their skills and proficiencies.

Park (2007) asserted that the doctoral process is changing, and this necessitates consideration of the structure, content and pedagogies that can prepare candidates for the different roles they may undertake in society. Some have suggested a growing emphasis in doctoral work on 'Mode 2' knowledge where established disciplines and established forms of scientific production are being supplemented and complemented by more open and fluid forms of knowledge production (Gibbons et al 1994; Nowotny et al, 2001; Scott 2014). These developments mean that supervisors need to interpret the ways and applications of many disciplines and their roles in society. The emphasis on interdisciplinary research is increasing at a time when our supervisors are still often grounded in one discipline (Wisker and Claesson 2013). Other work has shown that the link between publications and the doctorate is getting closer and evidence of the impact of research is increasingly required (Sharmini et al 2015).

The recent expansion in doctoral provision together with the complex and changing scenario in doctoral education have challenged universities to provide relevant programmes. The continued discussions on how PhDs can be configured, including in conjunction with industry (Borrell-Damian, 2009), and the development of the different types of doctorate invites consideration of what a doctorate is, and what it is for. Wellington (2013: 1492-3) suggests five different areas of 'doctorateness', forming a framework for doctorate education. These five areas are: (1) preparing for a future role or career ('academic apprenticeship', licence to teach or other employment); (2) career development or continuing professional development, improving one's practice; (3) as a vehicle for developing more transferable skills, including research, problem-solving, writing and communicating; (4) to satisfy curiosity and intellectual interest; (5) knowledge production and originality in research. These focus heavily on the candidate experience, which although important, do not acknowledge the more utilitarian and communitarian ideals that can underpin programme design (Govers, 2013), and the debate continues on what a doctorate is (Poole, 2014). The concept of a doctorate varies across time, space and disciplines, and is characterised by diversity, but how far should supervisor development programmes explore this diversity or restrict themselves to organisational understandings of purpose, quality and outcome?

Borrell-Damian, L. (2009) Collaborative Doctoral Education: University-Industry Partnerships for Enhancing Knowledge Exchange. European Universities Association: Brussels.

European Commission. European Charter for Researchers. Online available from: <http://ec.europa.eu/euraxess/index.cfm/rights/europeanCharter> accessed 2 June 2015

Fink, D. (2006). The professional doctorate: Its relativity to the PhD and relevance to the knowledge economy. *International Journal of Doctoral Studies*, 1, 35-44.

Gibbons, M, Limoges C, Nowotny H, Schwartzman S, Scott P and Trow M (1994): *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. London. Sage

Govers, E. (2014) An analysis of ethical considerations in programme design practice. *Journal of Further and Higher Education*. 38(6) 773-793

HESA (2014). International students in UK higher education: the UK and its competition. Online available from <http://www.universitiesuk.ac.uk/highereducation/Documents/2014/InternationalStudentsInHigherEducation.pdf>

Jorgenson, T. (2012) CODOC: Co-operation on Doctoral Education Between Africa, Asia, Latin America and Europe. European Universities Association. [http://www.eua.be/Libraries/Publications\\_homepage\\_list/EUA\\_CODOC\\_web.sflb.ashx](http://www.eua.be/Libraries/Publications_homepage_list/EUA_CODOC_web.sflb.ashx)

Mc Alpine, L. & Norton, J. (2009). Reframing our approach to doctoral programs: a learning perspective. *Higher Education Research and Development*. 25(1) 3-17.

- Nerad, M. (2014). Developing "Fit for Purpose" Research Doctoral Graduates. In Globalization and Its Impacts on the Quality of PhD Education (pp. 111-127). SensePublishers.
- Nowotny, H, Scott, P and Gibbons M (2001): Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty. Cambridge. Polity Press
- Park, C. (2007). Redefining the doctorate. Higher Education Academy.
- Poole B (2014) The rather elusive concept of 'doctorateness': a reaction to Wellington Studies in Higher Education <http://www.tandfonline.com/doi/abs/10.1080/03075079.2013.873026>
- Sharmini S, Spronken-Smith R, Golding C & Harland T (2015) Assessing the doctoral thesis when it includes published work. Assessment and Evaluation 40.1 pp 89-102
- Wellington, J. (2013) Searching for Doctorateness. Studies in Higher Education. 38(10) 1490-1503
- Wisker G and Claesson S (2013) The Impact of Cross-Disciplinary Culture on Student-Supervisor Perceptions. International Journal of Doctoral Studies Vol 8