



UK Council *for* **Graduate Education**

**New Dimensions for Doctoral Programmes in Europe –
Training, Employability and the European Knowledge Agenda**

The UKCGE Summer Conference held at the European University Institute,
Florence, Italy. 6-8 July 2006

In 2004 the Executive Committee of UKCGE took the decision to hold its 2006 Summer Conference on a European theme and locate it outside the UK on the European Mainland. This conference was the culmination of much effort and eventually attracted a wide audience from over 20 European countries as well as attendees from the US, Australia and New Zealand. It would be quite impossible to summarise within this newsletter the excellent, informative content of the presentations and discussions, both formal and informal, that ensued.

Plenary Sessions

The plenary sessions were given by Dr Georges Bingen, Head of Strategy & Policy Unit, Directorate of General Research, European Commission, Dr Debra Stewart, President, Council of Graduate Schools, Washington, USA, Lesley Wilson, Secretary General, European University Association, Belgium, Karsten Vandrup, Senior Research Manager, Nokia Corporation, Denmark.

Georges Bingen presented a wide overview of EC issues, emphasising the critical significance of research to the European agenda, the mobility of researchers and the increasing importance of career development of researchers and the European Charter for Researchers.

Debra Stewart's overview of the current position in the United States recognised the many pressures to which US universities are giving attention. She noted the declining US share of the international postgraduate market due to the increasing international competition created in part by the commitment of some developing countries to increase the numbers of research students by up to 10 fold over the next decade. This was to be seen in the context of the reliance of the US on overseas science and engineering doctoral students (from ca 1980 the percentage of doctorates awarded to US citizens has reduced from ca 77% to 40%). PhD completion rates were at a worrying level prompting much consideration of strategic, supportive interventions. Statistical analysis shows that those less likely to complete were minority groups, women and domestic (rather than international) students.

Lesley Wilson gave the first of two plenary lectures substituting for Professor Sir Roderick Floud who was unable to attend to give his plenary on Defining Doctoral Programmes in Europe - the EUA Role. OECD and other data illustrated the growth in student numbers, including demand from international students, and the increased income and employment rates for graduates compared with non-graduates. In the context of the expected demand for up to 700,000 additional researchers in Europe there was some disturbing data. If current HE participation levels were maintained until 2018 the demand for HE places in the

EU would drop by 20% with wide in-country variation of “excess” or too few places (ranging from Poland with 91k excess places to Germany with a 182k shortfall). Of particular note was the observation that while the EU25 produced many more PhDs than the USA or Japan, the proportion of researchers in their labour force was lowest (5.5 per 1000; US = 9.1, Japan = 10.1).

Karsten Vandrup’s plenary presented an essentially academic audience with some interesting challenges, particularly in the context of a metanational company. In facing up to the commercial global challenges it was made clear that doctoral candidates who wanted to work in consumer-product led industries needed to develop understanding of more than one discipline, to understand consumer issues and “to know the business”.

In the final plenary presentation Lesley Wilson gave a view of the doctoral discussion in Europe, including a description of the many activities with which EUA is, or has recently been, engaged. Lesley summarised the main issues emanating from various meetings (Bologna, Lisbon, Bergen, Salzburg) and looked forward to the meeting of Ministers to be held in London in 2007. The results of the TRENDS survey indicated considerable movement across Europe to degree structures based on three cycles with half of respondents indicating that they now include taught courses in their doctoral programmes, 30% having established doctoral schools and 67% considering the employability of their future graduates to be “very important”.

Keynote Presentations

Keynote presentations were given by Professor Ella Ritchie, Pro Vice Chancellor (Teaching and Learning), University of Newcastle upon Tyne, UK, Anders Steinwall, Ministry of Education, Research and Culture, Stockholm, Sweden, Professor Rune Nilsen, University of Bergen, Norway and Dr Iain Cameron, Head of Research Careers and Diversity, Research Councils UK.

Ella Ritchie, who had coordinated the Quality Network of the EUA Doctoral Programme in 2005 discussed the diversity of doctoral programmes in Europe. This manifested itself *inter alia* in structure, length, the extent of any research training programmes, supervision, national identity, the status of the doctoral candidate and variations between disciplines. It was made clear that doctoral education is affected by a range of academic, institutional and national cultures and, while it is important to share and learn from good practice and ensure a level of comparability to allow for mobility of early stage researchers, it is also necessary to allow for a continuing variation in practice.

Anders Steinwall gave a Scandinavian perspective on the doctorate. An analysis of Denmark, Finland, Norway and Sweden had concluded that all four countries with different requests for doctoral award had many similar challenges: low completion rates, too few degrees awarded, long timescales for completion of a doctorate with graduates considered too specialised and not well prepared for work outside universities. Salaried and industrial doctoral students, requirements to agree individual study plans and pan-Scandinavian Research Schools have all assisted the reform process and have resulted in improved PIs including, an increase in the number of doctorates awarded, better structured training in most disciplines, better student funding, shorter completion times and increased collaboration with industry.

Iain Cameron gave a detailed review of the UK’s approach to skills training in the context of Government priorities particularly for the supply of scientists and engineers and increasing diversity in the workforce. Iain noted the need to ensure that employers were more satisfied

with new doctoral graduates and the need to continue to change the way researchers are perceived and managed.

Rune Nilsen's presentation on innovative developments in doctoral programmes in Europe began with the premise that new knowledge comes most frequently from the intersection of disciplines and the consequential need for the development of interdisciplinary research groups. He created some discussion as to what constituted the critical mass of researchers needed to create an "excellent" research environment and the extent to which size was important. The need for similar patterns for doctoral programmes across Europe was noted if there was to be significant mobility of early stage researchers.

Good Practice and Discussion workshops

Good Practice and Discussion workshops presented by Professor Tony Fell, University of Bradford, Dr Padraig Walsh, Irish Universities Quality Board, Dr Tine Ejdrup, Vice-President, Eurodoc, Professor Stuart Powell, University of Hertfordshire, Professor Maresi Nerad, Director, Centre for Innovation & Research in Graduate Education, Washington, USA and Dr Andreas Frijdal, Head of Academic Service, EUI, Italy. All these sessions were run in duplicate so that they could be attended by all delegates.

Tony Fell considered the national and international context of research supervisor training ranging from the UK's QAA Code of Practice to the EU Charter for Researchers. He described the key elements required in training programmes emphasising the importance of the use of real life case studies.

Padraig Walsh presented a summary of recent developments in Ireland in career development of doctoral and postdoctoral researchers. Being a relatively small country Ireland had taken a national approach to its modernisation of such training with strategic innovation funds of €1.2B. Using the Bologna principles and the Salzburg descriptors and investing in a Graduate School system and introducing generic and transferable skills development with a quality assurance scheme for a contractual framework between student, supervisors and institutions there are already indications of reduced PhD completion times and increased completion rates.

Tine Ejdrup gave the view of students as recognised by Eurodoc. She described the concerns of doctoral candidates which include the quality of their experience, labour/salary conditions and future career prospects. There is clearly a concern across Europe about the low pay of PhD candidates and lack of attractive salary and career opportunities for researchers. Tine also questioned whether the PhD experience in most countries is an appropriate preparation for a career outside academia.

Stuart Powell summarised various issues relating to doctoral programmes using data from a survey of a number of countries. The examples chosen to illustrate the theme of the presentation indicated a very wide range of practices but some relatively common themes about time to completion, change in the number of doctoral candidates, etc.

Karsen Vandrup talked about enterprise and innovation in graduate programmes. He emphasised the need to include *inter alia*, consideration of innovation and the bringing together of knowledge from traditional disciplines, innovativeness, risk management, detailed research codes of conduct, recognition of the different timescales between academia and industry and training in enterprise skills.

Maresi Nerad and Andreas Frijdal considered how to define and measure successful PhD career outcomes. The Centre for Innovation and Research in Graduate Education

(University of Washington) had developed and is using a longitudinal survey of doctoral students which has been tailored for different subject areas. This has led to a range of interesting outcomes that debunk a number of assumptions about doctoral students, their career aspirations and their final career destinations.

Outcomes and Final Comments

Delegates' responses in the conference feedback forms were strongly positive and confirmed the original basis for organising this international dialogue between UK delegates and our European colleagues. The organisers could not have hoped for a better and more supportive response. It would be difficult to summarise the broad range of outcomes of the Florence Conference, however some key issues emerged, *inter alia*:

- the importance of doctoral research training and mobility of researchers, development of their generic skills, the move to increase attractiveness of research careers, and the need to regard doctoral students as “early stage researchers,” with appropriate rights.
- the need to coordinate policy on three main themes: the scope of research programmes, institutional issues (including programme structures, Graduate Schools), and to clarify the role and responsibilities of the State in funding and in setting legal frameworks, with the overall aim of influencing the May, 2007 Bologna Ministerial meeting in London in its consideration of third (doctoral) stage issues.
- a broad understanding that a PhD should represent a contribution to knowledge or an original application or interpretation of current knowledge, and to recognise that the doctoral training processes could and indeed should follow a range of well defined pathways, as expressed in different EU States, avoiding the “*one size fits all*” approach.
- that the future development of doctoral programmes should further facilitate mobility, and emphasise ethics, Intellectual Property Rights and their exploitation, innovation, skills for Small & Medium E, skills training for diversity, knowledge and understanding of business, and “grantsmanship”.
- the need for Universities and doctoral candidates to make explicit to potential employers, the skills gained through doctoral research.

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Professors Tony Fell and Ian Haines, Members of the *Florence Organising Committee* and of the *UKCGE Executive Committee*