

Response of UK Deans of Science to Adrian Smith's Postgraduate Review Consultation

This is a response from the UK Deans of Science (UKDS) to the consultation being led by Professor Adrian Smith in support of the Postgraduate Review initiated by Lord Mandelson.

The UK Deans of Science represent the individuals (usually formally designated as Deans) who are responsible for science in HEIs across the UK and who generally hold the budgets for science including any research budgets. There are currently around 60 members. The mechanism for providing the response to the consultation was to receive comments from Deans and then produce a final version following a meeting held in London on 8th December 2009.

Since the review, quite understandably covers both postgraduate taught (PGT) and postgraduate research (PGR) issues, though there are inevitable overlaps between the two, we have attempted to respond to the questionnaire by addressing the two areas separately.

We would be very pleased to contribute further information or comment if required.

Theme 1: International

- **How can the UK remain an attractive place for postgraduate study?**

PGT/PGR

As an increasing number of countries offer postgraduate education through the medium of English, UK HEIs will need increased support in marketing their offerings to the international market place. The potential roles of the British Council and the Foreign and Commonwealth Office Scientific Attaché network are crucial and need to be fully engaged in this. The full range of the UK HEI's PG education provision must always be represented in the UK overseas trade missions. However, there is also a need to ensure that the Government's commitment to international student recruitment is also manifested by effective, robust but welcoming border agency activity.

Part of an outstanding student experience for international students should include enhanced language skills in English for all those who may benefit from it.

It is important that we are able to stress that the UK is able provide high quality and intensive qualifications of relatively short duration.

PGT

Universities must continue to offer high quality and distinctive research-led teaching programmes that satisfy international market needs and produce employable graduates with Masters projects delivered in a quality research environment. The programmes should continue to concentrate on the UK style of pedagogy providing a learning environment which promotes critical analysis and scientific creativity.

PGR

The UK will continue to be a country of choice by delivering the best possible student experience through:

- provision of the highest quality of research environment with world leading researchers and excellent facilities, which, for science, includes excellent laboratories and other support systems
 - high quality training, including personal, professional and career development
 - postgraduate centres (for example graduate schools at university, faculty, departmental or inter-institutional level) that bring together social learning and academic learning.
-
- **How can those who have studied in the UK continue to be competitive in the international market place for talent?**

PGT/PGR

This can continue to be achieved by those who study in the UK by ensuring that skills that are developed are time-independent, thus producing graduates who are able to respond to rapidly changing world markets and to transfer their knowledge and skills so that they are employable in an international context.

To deliver such skills in a scientific context demands a UK environment with facilities comparable with those of leading universities across the world and training provided by world leading researchers who expose the students to their international activity and networks.

- **Does the proportion of UK domiciled students in the UK PG population matter?**

PGT/PGR

Yes. It is advantageous for international students to be embedded in an international environment with significant exposure to UK students. It is also very beneficial for UK students to be exposed to such an environment and for every cohort to consist of cultural mix of UK, other EU and international candidates.

Theme 2: Value of PG

- **What are the benefits of postgraduate education, to the individual, to HEIs, to businesses and to the wider economy and society?**

PGT/PGR

We believe that there are personal “life-style” benefits that accrue to those who extend their education to postgraduate level. However, for the individual, business and the wider economy there is an overwhelming financial benefit. The latter is best demonstrated by reference to London and the South East which, within the UK, have the highest proportions of the working population qualified to Masters level or above and are net importers (within the UK) of PhD holders - and also have the highest level of GDP per head of population. We believe that this is something that Regional Development Agencies might take into account when considering how to increase the productivity levels of their local economies.

PGT

All Masters programmes need to have the versatility to enhance skills, specialise in topics, give real exposure to research and research methodology and focus on the needs of the market to improve employability. They must also encourage and support continuing professional development and targeted interventions to develop needed skills.

PGR

The UK PhD provides generic skills as well as intellectual and professional development. The ability to become an independent and objective researcher, which is engendered as part of the thesis approach to a UK PhD, is a quality that is of universal value.

The science PhD also provides training for leadership in science based industries.

PhD students provide the life-blood of research in the organisation as they develop from taught programmes of studies to become respected experts in their field with an ability to focus, to work independently and as part of a team and to enhance the research contribution of the HEI which must provide an appropriate research environment.

- **Is there an optimal number of taught / research postgraduates studying in the UK?**

PGT

The numbers of postgraduate taught students will be market driven and will relate to the strategies of the Government and wider employment opportunities. However, the overall numbers need to rise if the UK is to remain competitive. There should be an expectation that a large majority of those qualified to Bachelors level will progress to at least one postgraduate qualification during their working lives.

PGR

There is room for additional UK and international PhD students. They add greatly to the research profile of the UK and both benefit from and support our world leading research activity.

Theme 3: Business, Employment and Skills

- **Are postgraduates equipped with the right skills, experience and knowledge to progress in employment and get significant value from the investment in their education?**

PGT/PGR

Science graduates will enter research within academia and outside, leadership positions within science industries and other areas where the highest level of generic skills will be of value. The challenge of a PhD will

ensure that the successful graduate will be able to succeed in a wide range of areas well beyond the subject of her/his doctorate.

The expert subject knowledge along with the generic skills of the PhD provides an excellent base for work outside the university environment. The skills gained from completing a PhD are useful but it is clear that a variety of contexts exist where further experience will be required.

There could be more emphasis on incorporating aspects of business and entrepreneurship in all postgraduate provision.

- **Do businesses in the UK make good use of the experience and skills that postgraduates can offer?**

PGT/PGR

It is likely that businesses that recruit PhD student graduates will understand strengths and weaknesses and tailor a programme of professional development accordingly. However, many SMEs outside the areas of science and technology fail to recognise the additional skills offered by the holder of a postgraduate qualification. This is especially true of micro-enterprises.

- **How can postgraduate provision in the UK better respond to the needs of business, especially new and emerging industries?**

PGT/PGR

There are many good examples where universities have been ahead of any perceived or stated demand for a particular postgraduate programme or activity. They have included innovative Masters courses, some Professional Doctorates but above all numerous innovative projects in scientific research.

PGT

There could be more relevant accreditation of postgraduate provision by professional, statutory and appropriate trade bodies, which might further drive the needs of business. Perhaps any new funding regime for postgraduate course could put a premium on those programmes that are appropriately accredited.

PGR

The research agenda as it relates to business can best be achieved by engagement by business and government in a triangular partnership with HEIs to increase the PhD student provision and help it to be business orientated whilst recognising and valuing the more generic skills of doctoral candidates.

Theme 4: Participation

- **What factors affect decisions of individuals as to whether or not to undertake postgraduate study?**

PGT/PGR

The most significant factors affecting the decision to undertake postgraduate study are:

- availability of funding
 - the quality of the research environment and in particular the perceived status of the doctoral supervisor and her/his previous track record in supervision and completion of PhDs
 - the size of the PhD student cohort
 - interest in the project
 - future employment prospects
- **How important are alternative models of postgraduate provision (e.g. part-time, distance learning) in supporting expanding and widening participation?**

At postgraduate level, funding is the most important factor. Flexible learning and models are not only a widening participation issue in supporting those from more disadvantaged backgrounds. More effective methods for widening participation exist at school level to ensure engagement with HE in the first place. At the postgraduate level the issue of access, beyond the aspect of finance, relates most frequently to the challenges of different lifestyles and employment arrangements and this is where flexible approaches and models of study can be of great benefit.

5: Fees and Funding

- **Is the current model of funding postgraduate provision sustainable, and does it offer the best possible value for money?**

PGT/PGR

Since there is no single and straightforward model of funding at present, we find this question impossible to answer.

- **Are there models of providing postgraduate financial support that would be more efficient and productive?**

PGT

There needs to be a serious and thorough review of the funding of postgraduate taught provision. Research councils have gradually withdrawn what little funding they used to supply and Hefce, for example, has not made up this deficit. The lack of any real approach to this issue is undoubtedly damaging to the UK economy. Any solution must take account of part-time study and fully incorporate the postgraduate lifelong learning agenda.

PGR

There is potential for greater involvement of business and industry in the financing of PhD student projects. Some progress has been made with this but more inspiration is needed. We believe that the Government needs to take a lead and act as a facilitator to develop this, both as a potential source of interesting research and a means of bringing business and academia closer together.

International business will be attracted by a critical mass and track record of PhD activity. Providing scholarships for UK PhDs will attract international applicants to join the cohort.

- **Are the current sources of financial support for postgraduate students widely understood by potential and existing students?**

PGR

The current position is confusing to both home and overseas students.

Theme 6: The Student Experience

- **What are the key elements of a high quality PG student experience?**

PGT

We believe the most significant issues are the opportunity to experience both cultural diversity and integration in the context of the cohesion experienced through being part of a course cohort and the readiness of course teams to respond to the needs of students from different educational and cultural backgrounds.

PGR

As indicated earlier the critical factors affecting the research student experience are the research environment, quality of the supervision, the quality of the research student training, inclusion in global networking opportunities and an experience supported by the university and students' union.

- **Are there innovative delivery models or mechanisms that benefit the student experience, which could be applied more widely?**
 - Graduate Schools that have an enhanced student experience as part of their mission.
 - Flexible programmes that are designed to meet the needs of candidates at all stages in their careers.

Ian Haines
Executive Secretary, UK Deans of Science
January 2009