

THE POLICY POTENTIAL OF INNOVATION & INTERNATIONALIZATION IN DOCTORAL EDUCATION

A breadth of international experts and stakeholders in graduate education—policy-makers, educational leaders, corporate donors, and researchers—gathered in Kassel, Germany, March 23 – 27, 2009 to explore how doctoral education could become a greater resource in educating future leaders who can help solve the world’s great challenges. Workshop participants developed several recommendations for policies to advance this goal. Developed in collaboration with experts from around the world by the Center for Innovation and Research in Graduate Education (CIRGE) at the University of Washington Graduate School and College of Education, in Seattle, WA, U.S.A., the workshop was hosted at the widely acclaimed International Centre for Higher Education Research at the University of Kassel (INCHER). These recommendations, listed below, will be further refined and elaborated in a forthcoming book, *Innovation and Internationalization in Doctoral Education*, which collects the findings of the workshop.

Why Focus Now on Policy Targeting PhD Education?

Doctoral education rarely has been the target of policy designed to achieve particular outcomes beyond the production of competent researchers. But today regional organizations such as the European Union increasingly look to doctoral graduates to staff positions in complex knowledge environments. National governments as diverse as those of Brazil, Norway, and South Africa, view doctorate holders as critical for innovation and discovery in all fields, but particularly in science and technology and for national capacity building and economic development. Consequently PhD production is simultaneously expanding around the world and being reformed with the goal of producing graduates prepared for roles as innovators and leaders in our increasingly globalized societies and economies. Now is the time to consider three critical aspects of doctoral education under globalization: the unequal distribution of intellectual capital; diversity of students, programs, and modes of inquiry; and intellectual risk-taking and interdisciplinarity.

Equity in the Distribution of Intellectual Capital

People increasingly cross national borders to study. In 2006 nearly 3 million students were enrolled in higher education institutions outside their home countries. Among these, doctoral students come mostly from poorer nations to study in richer nations with comprehensive research and university systems. Yet, the opportunities thereby created for sharing knowledge, enhancing the cross-cultural skills of both international and domestic students, and building scientific capacity in less developed countries are not realized. Instead of returning home, many international graduates end up working in countries that already have well-developed research and education centers (i.e., “brain drain”). Furthermore, host institutions do little or nothing to bring international and domestic students together in ways that enhance students’ learning of cross-cultural skills. But doctoral graduates everywhere increasingly need to function in an international context and the unequal distribution of intellectual capital worldwide

hampers our capacity to solve global problems. For these reasons, we call on international organizations, national governments, universities, and individual doctoral programs to examine their international policies through the lens of global inequality, to look for ways to mitigate the negative consequences of “brain drain,” and to enhance the participation of international students in host institutions. Therefore, we recommend:

- finding ways to share expertise and capacity between more developed and less developed research and educational systems through not-for-profit networks which encourage collaboration instead of competition for talent;
- encouraging the growth of internationally recognized, high quality PhD programs based on expertise in particular specialty areas in countries with less comprehensive research and university systems;
- promoting capacity-building projects that can employ doctoral-level researchers in the developing world;
- training PhD supervisors (advisors, committee members) to effectively facilitate cross-cultural research groups;
- familiarizing international doctoral researchers from the start with the academic expectations and the cultural context of their host institution; and
- helping international doctoral candidates nurture scientific and professional relationships with their home country while studying abroad, including support for presenting and publishing in their native language, arrangements which allow students to earn a PhD from a foreign university while doing research at home; and “re-entry” support for graduates who wish to return to their home countries.

Diversity in Doctoral Education in International Perspective

There is as yet no global nor even a broadly international picture of existing diversity in PhD programs. Yet participation in PhD programs is marked by patterns of inclusion and exclusion related to gender, mode of study, age, disability, citizenship status, language background, socio-economic background, and religion. In order to better understand how diversity and inequality are reflected in PhD programs worldwide we call on international organizations, national level ministries, and associations of universities to create a basis for an international system of diversity indicators. To this end, we recommend:

- developing a common approach, taxonomy, or classification system across disciplines and educational systems;
- adopting a common approach to student data directly connected with national census data so that it is possible to establish the proportion of national populations represented in PhD programs;
- careful consideration of the meaning of under-representation of certain groups in doctoral education.

To promote greater diversity among doctoral students, we recommend:

- discouraging sole reliance on quantitative criteria for selection of doctoral candidates, and, where applicable, moving toward use of non-quantitative selection criteria.

Intellectual Risk-taking and Interdisciplinarity in Doctoral Research

Researchers today must cross disciplinary, national, institutional, and cultural boundaries. The advancement of knowledge requires willingness on the part of some to pursue risky but potentially transformative research projects. Yet in some cases existing academic reward structures discourage both boundary-crossing and high-risk research projects. As relative newcomers to research, doctoral researchers may be ill-advised to address interdisciplinary questions or to undertake risky research. Nevertheless, we argue there are several ways in which doctoral education can help to equip graduates to consider risky research projects, to work effectively in interdisciplinary and cross-institutional contexts, and assess risks in research careers. Therefore, because we value doctoral education that results in graduates who are creative, innovative, and imaginative, we recommend:

- that graduate students be admitted, trained, and rewarded for innovation and risk-taking;
- that graduate programs develop procedures for doctoral students to learn about and from risk-taking early in their program;
- that universities develop programs to explicitly train doctoral supervisors in the recognition and management of risk for their students;
- that universities, departments, and programs develop a research culture that values and rewards innovation and creativity; and
- that every doctoral curriculum train students to be aware of the limits and strengths of their disciplines by exposing them to other disciplines through team-building opportunities.

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