Table of Contents

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From Graduate Student to World Citizen in a Global Environment

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As globalization advances, societies become more dependent on information and knowledge. Knowledge societies rely on the production of knowledge, its transmission through education and training, and dissemination through communications technologies. Universities are placed in a unique position since they play a significant role in the production of new knowledge and training of future leaders. This applies particularly to doctoral education.

Responding to the competitive pressures of globalization, several countries have introduced and implemented innovative structures for the training of doctoral students. Examples of these new structures include the German Graduiertenkolleges; the Australian Cooperative Research Centre Training programs; and the National Science Foundation's (NSF's) Integrated Graduate Education and Research Trainee Programs (IGERTs). The new structures often share many characteristics: They are often problem- and theme-based, rather than disciplinary in orientation; engage in multidisciplinary research connected to the outside world; provide professional socialization through multiple mentoring; offer professional skills training in such areas as making presentations, teaching, publishing, and grant-writing skills; place team work as a required component of the program; and include of international components and collaborations.

Evaluating Ph.D. Programs

One way to envision the prospects of Ph.D.s in the future is to consider whether existing programs are suitable for a knowledge-based society and to evaluate the emerging forms of doctoral education. The Center for Innovation and Research in Graduate Education (CIRGE) at the University of Washington is establishing an empirical base for assessing both existing doctoral programs and innovative ones, through studies of Ph.D. recipients. CIRGE is also directing efforts to evaluate U.S. NSF—funded innovative doctoral programs—the IGERT programs. The evaluation focuses on whether the programs are appropriate for the demands of the new economy and address the issues that have been at the forefront of current debates about graduate education since the 1990s.

Doctoral Education in the 21st Century

After a decade of doctoral education outcome studies and the results of research-based IGERT evaluation, CIRGE findings showed that Ph.D. holders were satisfied with multiple mentors, the interdisciplinary approach to problem-solving, the richness of the multidisciplinary research environment, and the opportunity to study with a cohort of peers from various disciplines.

Based on CIRGE studies and evaluations, we make the following recommendation for future-oriented doctoral education. Such programs should have the following characteristics:

1. They will prepare Ph.D. students to work in interdisciplinary groups by providing epistemology courses that focus on the nature of knowledge, its foundation, and validity. As most scientific, technical, or social problems become too complex to be solved by individuals or from a single perspective, research needs to be approached from a multidisciplinary perspective.

2. Future-oriented doctoral programs can integrate professional skill building into doctoral education by providing students with the experience of teaching, presenting research findings before a diverse audience, writing and publishing—in short, preparing doctoral students for a variety of future careers.

3. These programs introduce collective supervision. The requirement that one person perform all functions as an ideal mentor is unrealistic and contributes to faculty burnout. A panel of advisers can provide the students with more advice, insight, and consistent guidance.

4. These programs introduce effective teamwork and provide opportunities for collaborations on small research projects or coauthoring of articles by students or by students and faculty.

5. They establish structured international collaborations with doctoral programs in other countries to conduct research on some global issues and problems.

6. They encourage multiple flows in research collaboration between economically advanced and poorer countries with limited research resources or infrastructure.

7. They reintroduce foreign-language requirements, especially in English-speaking countries. The lack of foreign-language requirements for Ph.D. education has had negative consequences: much is lost by not being able to communicate directly with colleagues and collaborators, and communicating solely in English grants privileges to some students and puts others at a disadvantage.

8. Future-oriented programs initiate an approach that revives an awareness and commitment to civic engagement and world citizenship. World citizenship includes the notion of a citizen who crosses national boundaries without seeking to assimilate and to homogenize but instead accepts differences and embraces diversity.

In preparing for a knowledge-based society, higher education systems will need to be modified. We recommend programs that focus on creating opportunities for doctoral students to become global citizens who can not only operate within a small sphere of elite intellectuals but also "move beyond critical public intellectuals to world citizens whose collective knowledge and actions presuppose visions of public life, community and moral accountability" (Henry Giroux). To put into operation and implement these changes will be our task for the future.

[Online] Available: http://www.bc.edu/bc_org/avp/soe/cihe/newsletter/Number40/p8_Nerad.htm