

National Research Council Assessment of Research-Doctorate Programs

Overview of the Study

Approximately every ten years, the National Research Council conducts a study of the quality and characteristics of doctoral programs in the United States. Building on studies published in 1983 and 1995, the 2006 assessment of research-doctorate programs will collect data on programs in over 60 areas of study at American universities. The purposes of this comparative study are to:

- Help universities improve their doctoral programs through benchmarking
- Expand the talent pool through easily accessible information that helps potential doctoral students select programs that best fit their interests
- Benefit the nation's research capacity by improving the quality of doctoral programs and their students

The study is supported by funding from the National Science Foundation, the Alfred P. Sloan Foundation, the Andrew W. Mellon Foundation, and the participating universities.

Criteria for Participation

The taxonomy developed by the NRC for the study includes programs in the arts, humanities, and social sciences; the biomedical sciences, including nursing; engineering and the natural sciences; and agriculture. Certain fields considered "professional" (e.g., management and social welfare) are excluded from the study. More than 30 doctoral programs at Case meet the criteria for inclusion in the study. A program must have awarded an average of one doctorate per year over the past five years (2001-02 through 2005-06) to be eligible; it must also meet three of four criteria:

- It enrolls doctoral students.
- It appoints its own faculty.
- It develops its own curriculum for doctoral study.
- It makes recommendations for the award of degrees.

Faculty to be included in the study must belong to one of three categories:

Core program faculty are those who have served as a chair or member of a program dissertation committee in the past five academic years (2001-02 through 2005-06) or are serving as a member of the graduate admissions or curriculum committee. The faculty member must be currently (2006-07) and formally designated as faculty in the program, and not be an outside reader who reads the dissertation but does not contribute substantially to its development. Emeriti are included only if they have, within the past three years, either chaired a dissertation committee or been the primary instructor for a regular PhD course.

New program faculty are current faculty members who do not meet the criteria specified for core faculty, but have been hired in tenured or tenure-track positions in the past three academic

years (2003-04 through 2005-06) and who are expected to become involved in the graduate program.

Associated faculty members have chaired or served on program dissertation committees in the past five years, have a current faculty appointment at Case, but are not designated core or new faculty in the program. They should not be outside readers, or faculty currently employed at other universities. Emeriti are included only if they have, within the past three years, either chaired a dissertation committee or been the primary instructor for a regular PhD course.

Study Questionnaires

The study will proceed primarily through web questionnaires to universities, programs, faculty, and students, gathering information on quantitative variables related to:

- Scholarly productivity of program faculty
- Effectiveness of doctoral education
- Research resources
- Demographic characteristics of students and faculty
- Resources available to doctoral students
- Characteristics of the doctoral program

These data, collected under uniform definitions, will be used to construct a large web-resident database, permitting comparisons of programs within a university and across universities. The database will be constructed so that it can be updated regularly. The NRC is working with Mathematica Policy Research, a survey research organization, to develop and administer the data collection process.

The **Institutional Questionnaire** will collect data about university-wide policies and practices. It will also collect retention and attrition data by race/ethnicity on full-time doctoral students who are U.S. citizens or permanent residents. Data will be collected for five broad fields: (1) Life Sciences; (2) Physical Sciences and Mathematics; (3) Engineering; (4) Social and Behavioral Sciences; and (5) Arts and Humanities.

A **Program Questionnaire** will be completed for each program eligible for the study. The Program Questionnaire asks detailed information about the program, including:

- Program fields and research specialties
- A listing of program faculty in three categories – core, new, and associated
- Enrollment and degree completion data, including detailed retention data by gender
- Doctoral recipients in the program from 2003-04 through 2005-06
- Admission policies and other characteristics of the program, including student financial support
- Data on postdoctoral scholars associated with the program

Completion of the Program Questionnaires will be a joint effort by the School of Graduate Studies, the Center for Institutional Research, and program directors. As much data as possible will be provided from central sources in order to reduce the reporting burden on departments and programs.

A **Faculty Questionnaire** will be sent to the core faculty listed on the Program Questionnaire. The Faculty Questionnaire asks about educational background, previous and current employment, areas of research specialization, and professional accomplishments, including patents, research grants, and honors and awards. Faculty will also be asked to provide demographic data. The data provided on the Faculty Questionnaire will be used to match the faculty in a program to data from national databases of publications, citations, and grants.

An **Admitted-to-Candidacy Student Questionnaire** will be sent to advanced students at Case in four fields of study: English, Physics, Neuroscience, and Chemical Engineering. The national study will also survey students in Economics.

Results and Reports

The data collected by Mathematica Policy Research will be analyzed by NRC staff, who will design and construct program ratings using the collected data, including quantitatively based estimates of program quality. These data will be released through a web-based, periodically updatable database and accompanied by an analytic summary report. Following this release, NRC's Committee on Assessment of Research-Doctorate Programs will conduct a second phase of the study during 2008, when a group of experts will analyze the data and write essays that will be part of a final report on doctoral education in the United States.