



# Council of Graduate Schools

## ***Ph.D. Completion Project: Policies and Practices to Promote Student Success***

### **Executive Summary**

The Ph.D. Completion Project is a seven-year, two-phase project that addresses the issues surrounding Ph.D. completion and attrition. The Council of Graduate Schools (CGS), with generous support from Pfizer Inc and the Ford Foundation, has provided funding to 29 major U.S. and Canadian research universities to create intervention strategies and pilot projects, and to evaluate the impact of these projects on doctoral completion rates and attrition patterns. An additional 25 partner universities are participating in various aspects of this project.

One of the goals of the Ph.D. Completion Project is to produce the most comprehensive and useful data on attrition from doctoral study and completion of Ph.D. programs yet available. In 2008, CGS published the first two monographs in a new series based on this project. The first, *Ph.D. Completion and Attrition: Analysis of Baseline Program Data from the Ph.D. Completion Project* reported baseline program completion and attrition data from this project. The second, *Ph.D. Completion and Attrition: Analysis of Baseline Demographic Data* presented data on completion rates by gender, citizenship, and race/ethnicity. The third volume in the series, *Ph.D. Completion and Attrition: New Evidence from Exit Surveys of Ph.D. Completers*, published in 2009, painted a broad picture of the experiences and perceptions of graduate students as they went through their doctoral programs, as reported by Ph.D. completers. This fourth volume in the series reports on policies and practices at participating institutions that aim to improve Ph.D. completion rates and reduce attrition in doctoral programs. Along with the other three volumes in this series, the monograph provides baseline data on the factors influencing Ph.D. completion and what institutions can do to recruit and retain a more diverse set of students and to encourage Ph.D. completion.

### **Data and Methodology**

The report focuses on the 21 institutions participating as Research Partners in Phase II because the eventual goal of the project is to examine the relationship between the interventions and doctoral completion and attrition. Consistent and long-term data are available only for institutions who are currently active participants in the project. Overall, 250 programs are participating in Phase II of the project. The Mathematics & Physical Sciences field accounts for about one-quarter (24.8%) of all participating programs; Engineering for about one-fifth (19.7%); Life Sciences and Humanities 18.7% each; and Social Sciences 17.7%.

The data sources for this report include the institutional proposals submitted in response to CGS's request for proposals; the two baseline assessment templates created by CGS that listed the policies and programs already in place at the department and institutions levels (although not all institutions provided these templates so the data on existing practices were incomplete); annual reports submitted by the institutions; the Ph.D. Completion Project website ([www.phdcompletion.org](http://www.phdcompletion.org)); notes from CGS site visits; and data on selected characteristics of the institution and student body.

To facilitate analysis, data from the proposals and the annual reports were combined into spreadsheets that focused on different themes (for example, goals of the project; proposed interventions and rationale; implementation progress, successes, and challenges; and evidence of impact of the project). This helped highlight common themes across the set of institutions within these broad topics. The interventions themselves were coded into six separate “bins” or areas based on a framework for understanding Ph.D. completion. These six factors included: selection and admissions; mentoring and advising; financial support; research mode of the field; curricular and administrative processes and procedures; and program environment. Where appropriate, interventions were also grouped into subcategories under the broader headings. The monograph highlights selected examples in these subcategories of interventions that seemed promising or interesting or a particularly good example of a particular intervention. The selections were meant to be broadly representative and illustrative and do not represent a ranking or judgment that policies and practices of other institutions not highlighted were somehow less interesting or innovative.

### **Overview of the Research Partners**

Six out of 21 Research Partners in Phase II of the project are private institutions; the remaining 15 are public. The total number of doctoral programs offered by these universities ranged from 21 to 138. The percentage of women enrolled in doctoral programs at these institutions ranges from 40% to 63%. The majority of institutions (17 out of 21) reported that the percentage of U.S. minority students enrolled in doctoral programs was less than 20%. The percentage of international students enrolled in doctoral programs ranged from 14% to 50%.

Following CGS’s overarching goal for the project, all the institutions set as the overall goal for their individual projects a reduced attrition rate and improved completion rate in the doctoral programs participating in the project, with a special emphasis on improved outcomes of underrepresented minority and women students.

The sections below are organized around the six factors listed earlier although we note that these are not mutually exclusive categories and interventions often address several different facets of the doctoral experience and go across categories. Each section illustrates some policies and practices implemented by the institutions.

### **Promising Practices: Student Selection and Admissions**

Universities participating in the Ph.D. Completion Project have developed a variety of mechanisms for integrating into the doctoral admissions process a greater attention to the “fit” or “match” between a particular student and a specific program, alongside considerations of traditional measures of student quality. A consistent theme across each of these areas of intervention in selection and admissions is the recruitment, retention and success of underrepresented students.

Recruitment: Offer pre-admission and pre-enrollment campus visits; use early research opportunities as a recruitment tool; improve efforts to recruit underrepresented students.

Transparency: Improve department websites to ensure that each includes additional data, information, and resources necessary for prospective students to make informed decisions; increase transparency in the selection processes and clarify expectations for students in their doctoral programs, including assessment milestones.

Admissions: Develop workshops for admissions committees; select students based on “fit” to program; survey applicants to determine why admissions offers are accepted or declined.

## **Promising Practices: Mentoring and Advising**

Success in achieving a Ph.D. depends upon a close and effective working relationship with one's advisor and mentor. Mentoring is also an area that can pose unique challenges to universities seeking to implement program-level or university-wide improvements because mentoring is practiced and valued unevenly in doctoral programs. Improvements in mentoring and advising outnumber improvements in any other area of activity and innovation in the Ph.D. Completion Project. Promising practices identified by participating universities in the area of mentoring and advising include:

Resources for students: Provide a comprehensive orientation to prepare students for graduate school; develop/revise graduate student handbooks; clearly articulate program expectations/academic milestones; develop/enhance online mechanisms so students and faculty can track progress and communicate with one another; implement online milestone tracking systems, "dissertation checklists," electronic portfolios, and annual progress report systems that integrate graduate school records, student input, and evaluative comments from faculty.

Regularity and uniformity of progress review: Implement regular advisor/advisee meetings and progress reports; encourage programs to set up annual student performance review systems.

Early advising: Require each first-year student to have an advisor or advisory structure; conduct regular evaluations of progress; encourage women and minority students to participate in programs that offer mentorship outside the department; create ombud position to support first-year students.

Resources for faculty: Offer workshops for faculty on mentoring; offer mini-grants to help faculty develop initiatives aimed at improving the quality of mentoring; recognize excellence in mentoring through faculty awards.

Other mentors: Train peer mentors and ensure that all new students are assigned a trained peer mentor; provide students with external mentors.

## **Promising Practices: Financial Support**

Students and researchers often cite financial support as being among the most influential factors on Ph.D. completion and attrition but there is evidence showing that not all forms of student support are equally beneficial. Thus, financial support needs to be structured to optimize completion and enhance academic and social integration. Promising practices in the area of financial support and structure include:

Increased student support: Increase stipend levels to be comparable to peers; increase the number of selective university fellowship awards; increase the number of summer research awards in the humanities and social sciences; provide health insurance premium coverage; explore higher stipends and more one-quarter releases from teaching for dissertating students; change graduate assistantship allocation to a "Ph.D. preferred" model, whereby 80% of doctoral students and 20% of master's students will be funded; address potential IRS tax inequities within graduate student population.

Incentives to departments: Link departmental allocations and performance indicators of student completion.

## **Promising Practices: Program Environment**

The academic "environment" of a Ph.D. program is shaped by department-led and university-wide efforts to create the conditions for high expectations, high performance, and strong student support. Informal opportunities to participate in department events, regular social gatherings, or team sports may also

prove to be important components of a graduate student's socialization to their academic discipline. Promising practices include:

Support networks and support services: Initiate campus-wide efforts to bring students together across disciplines and within the department for academic and social interaction; encourage graduate student organizations in all programs/departments to explore community building activities; promote involvement of graduate students as members of campus-wide or departmentwide committees; highlight achievements and accomplishments of graduate students through newsletters, dinners, or other venues; develop a network for support; outreach to and integration of fellows.

Family accommodation policies: Implement a parental accommodation policy and institution-wide policy on family and medical leave for graduate assistants.

### **Promising Practices: Research Experience**

Researchers often note that the degree of social interaction characteristic of the sciences, where an apprenticeship model, research teams, and a laboratory setting prevail, can provide a more supportive environment than the solitary, individual research with often extended periods without advisor feedback that is often characteristic of the humanities. Interventions in this area focus both on pre-program research experiences (prior to starting the doctoral program) and early research experiences.

Pre-program research experiences: Identify top undergraduates and invite them to participate in a research institute late in their sophomore year to prepare and recruit these students to pursue doctoral studies; offer summer predoctoral institute for underrepresented students.

Early research experiences: Encourage lab rotations prior to choosing a mentor/research area; provide opportunities and funding for humanities and social sciences students to participate in research in the early stages of their programs and to attend professional meetings; provide students with a catalog of research opportunities and facilitate matching of research interests between advisors and students; streamline course requirements to allow students the opportunity to engage early in research.

### **Promising Practices: Curricular and Administrative Processes and Procedures**

This is a broad category encompassing the more traditional curricular and administrative processes and procedures as well as new initiatives aimed at providing support for writing during the dissertation stage (or earlier stages) or offering various types of professional development opportunities. These types of workshops and supports inhere in the programmatic/institutional structure and are a fundamental aspect of program quality. Promising practices include the following:

Administrative/curricular processes and procedures: Create/enhance institutional database on students via a web-based system to track student aid; monitor and track all students who leave; introduce a continuous enrollment policy to serve as the impetus for students to stay on track; refine policies and practices for matriculation and track and report on Ph.D. student degree progress; revise program review process to examine quality of each graduate program in terms of quality inputs, outcomes, and operational practice; streamline the sequencing of courses.

Writing assistance for graduate students: Offer a writing assistance program for graduate students at all stages through trained writing coaches or writing consultants (senior-level graduate students trained in writing); offer writing assistance to groups of students from several disciplines so they can appreciate the commonality of writing difficulties.

Support During the Dissertation Phase: Offer a Dissertation Retreat/Dissertation Boot Camp/Dissertation House/Dissertation Writing Institute for students who are stalled in their progress that offers uninterrupted time to focus on the dissertation, writing strategies, receive feedback, and build peer support; establish a

Doctoral Student Writing Room, where doctoral students could engage in project development, research and writing and collaborate with others; offer a summer Dissertation Writing Residency Fellowship for students who are not making progress (especially students from underrepresented groups).

Professional Development of Graduate Students: Offer a safe, hospitable space in which graduate students engage in microteaching activities, videotape themselves teaching, and engage in the peer review of teaching to develop skills in constructive peer teaching review; offer a University Graduate Certification in College Teaching, requiring workshop experiences in five competency areas as well as a mentored teaching experience; offer a Graduate Teaching Fellowship Program to provide mentored teaching experiences for qualified students who might not normally have such an opportunity in their own discipline; offer enrichment events aimed at preparing students for job applications and interviews or preparing them for careers in other sectors.

### **Impact of the Ph.D. Completion Project on Institutions: Early Findings**

While it is still too early to expect hard evidence linking the project activities to improved completion and reduced attrition rates in the doctoral programs participating in the project, there are a number of important changes that institutions attributed to the project. These included improved tracking of doctoral students; development of a “culture of evidence;” improved understanding of factors affecting doctoral completion and attrition through research projects; increased sensitivity to issues facing students from underrepresented groups; improved coordination and collaboration across the different departments and offices across campus, and in a few cases improved completion rates or progress towards completion.

### **Future Plans**

As the project continues and additional data are collected and analyzed, CGS will study the impact of groups of interventions designed to improve completion rates. The culminating publication in this series, scheduled for release in 2010, will include a comprehensive analysis of the quantitative and qualitative data submitted by the partnering universities in Phases I and II of the Ph.D. Completion Project, as well as a description of those policies and practices that appear to have had a demonstrated effect on completion rates and attrition patterns over time. It is our hope that the findings of the Ph.D. Completion Project will transform our understanding of the factors that contribute to higher Ph.D. completion rates nationwide, particularly for women and minorities.

More detailed information about the project, including a full list of research and project partners for both phases, is available on the Ph.D. Completion Project website at [www.phdcompletion.org](http://www.phdcompletion.org).