Understanding PhD Career Pathways: A CGS Best Practice Project Update

At the 2013 CGS Annual Meeting in San Diego last December, CGS President Debra Stewart announced the launch of a study intended to determine the feasibility of a project to collect PhD career pathways information across a range of broad fields. Now that this feasibility study is underway, the research team presents this update to the CGS community on the history, scope, goals and progress of the effort.

A Record of Success
CGS boasts a strong history of fostering partnerships to tackle the most pressing challenges in graduate education. We have made great strides in the effort to improve graduate education through this proven model of collaborating with member institutions to develop best practices and implement meaningful change. As a result of this process, we have launched efforts to capture essential information about completion and attrition through the Master’s and PhD Completion Projects, prepare students for specific careers through Professional Science Master’s programs, and shed light on factors that may contribute to the successful completion of a PhD among ethnically and racially underrepresented students in STEM fields through the Doctoral Initiative on Minority Attrition and Completion (DIMAC). And while this history features much of which to be proud, it also leaves much to do.

Responding to a Need
One area of urgent need identified by deans, students, and other stakeholders is a common, comparable set of definitions and standards from which graduate schools and graduate programs can understand the careers of those who complete graduate degrees. CGS has been exploring the need for graduate career pathways information since its 2010 report The Path Forward (CGS and ETS, 2010) recommended that universities should begin to collect career outcomes information. The report was followed by a global summit in 2011 in Hong Kong on Global Perspectives on Career Outcomes for Graduate Students, which concluded that “it is important for universities and other stakeholders to expand the capacity to track career patterns and outcomes for (post)graduate students over time” (CGS, 2012, p. 195).

These groundwork activities led to the successful completion in 2012 of Pathways Through Graduate School and Into Careers, a significant policy study that surveyed graduate deans, students, and employers about their perceptions and needs related to graduate career pathways (CGS and ETS, 2012). The Pathways study, which was led by a 14-member commission of industry leaders, university presidents, graduate deans and provosts, re-emphasized that universities should improve practices in professional development and their collective understanding of career trajectories.

Through the Pathways surveys, CGS learned that graduate deans and students alike were dissatisfied with the availability of career pathways information. According to the deans’ survey, a full 85% of graduate deans were unsatisfied with their institution’s ability to collect career pathways information (Wendler, Cline, Kent, and Mageean, 2012). Of currently enrolled PhD students and recent PhD completers, 54% felt they received less information about careers than needed before entering graduate school. Even more troubling, 10% of PhD students and alumni reported receiving no career information at all prior to matriculation (Wendler, 2014).

While professional programs often collect information on the career pathways of their graduates, this practice is uncommon in doctoral-level research-oriented programs. At the doctoral level, aggregate numbers indicate that roughly 50% of PhD holders do not enter careers in academia, the sector for which they are most often trained (NORC, 2013). While the preparation of future faculty remains a crucial part of the mission of graduate institutions, it is clear that the PhD can also prepare students to succeed in a wide range of careers. One question that remains is: Can we develop a common set of
definitions and standards that graduate schools and graduate programs might use to better understand the array of potential career paths of PhD graduates?

The Project

To advance the possibility of collecting such information, CGS is assessing the feasibility of a project to gather long-term career pathways information of PhD graduates at the program level. A new grant from the Andrew W. Mellon Foundation supports our work to understand the career pathways of PhD holders in the humanities and social sciences, and a continuing grant from the Alfred P. Sloan Foundation enables us to simultaneously study those in science, technology, engineering, and mathematics (STEM) fields and economics. This feasibility study consists of three main activities: composing a white paper on the state of the field in collecting career pathways information of PhDs, administering a survey of graduate deans at doctoral-granting institutions, and convening a workshop of experts to discuss the white paper and recommend next steps.

The goals of any potential larger follow-on project would be twofold: To better understand 1) the actual career pathways of PhDs, down to the program level, and 2) how to use this information to inform program improvement. Both of these goals raise serious questions, such as: Who should collect this information? What methods are most efficient for data collection? What categories should be used to meaningfully taxonomize PhD careers across broad fields? Who benefits from having this information? What is the best way to deliver this information to those who would benefit from it? How might this information be used to improve programs? These questions will not be answered easily. We suspect, however, that the benefits to be gained from collecting this information outweigh the obstacles inherent in the process.

We envision that understanding the career trajectories of PhD holders could strengthen graduate education in two particularly important ways. First, having access to career pathways information would give graduate schools a crucial metric for assessing, improving and marketing their programs. Second, prospective graduate students would have a better understanding of the potential fit between their career ambitions and programs they are considering, as well as a more comprehensive view of their career options after graduate school.

Institution-level data on career pathways might have other direct benefits to faculty and students. Not only would faculty better understand the impacts and potential impacts of graduate programs on their students’ career trajectories, but, graduate students, benefiting from improved programs and mentorship, would be better prepared for the full range of professions they enter in both academic and nonacademic sectors. Understanding the various career pathways taken by humanities and social science PhDs could also help make the broad case for the continued importance of advanced training in these disciplines to the graduate community at large.

Current Progress

Our research team has made significant progress on the three major components of the combined projects, the first being the white paper. From surveying the field, one early finding is the difference between pathways and outcomes, terms that are often used interchangeably in a policy context, but bear different meanings in scholarly writing on the subject. Speaking generally, in scholarly writing and studies that attempt to capture career information, the term career outcomes is more often used to describe quantifiable indicators of career success. With some exceptions, the term career pathways generally signals a more qualitative approach to understanding the career process. CGS has chosen to embrace the philosophy of a more holistic approach to understanding PhD careers with the choice of the term career pathways.

During the spring of 2014, CGS will field a survey of CGS member graduate deans at doctoral-granting institutions to learn more about what graduate deans are already doing in this area. Because of the relatively small sample size of this survey, we are strongly encouraging every qualifying institution to participate. These survey results will be incorporated into the white paper, and together they will frame a workshop, which will convene approximately 50 graduate deans, researchers from major studies, representatives of disciplinary societies, employers, and graduate students and alumni. The workshop will be held at the Airlie Center, a conference venue outside of Washington, DC, from August 18-19, 2014. A final report on all components of the feasibility study will be shared with the graduate education community in December 2014.

Broader Importance

Graduate education is not immune to issues facing higher education in general. New attention to accountability, added pressure to demonstrate the value of higher education, and sensitivity to the fact that higher education costs have grown are all of sustained interest to the policy community as well as the general public. However, we have seen that efforts to increase accountability at the undergraduate level have failed to take into account institutional mission or other differences among institutions. As the push for accountability continues at all levels, it is essential that graduate programs take the lead in developing their own modes of measurement and assessment before these processes are appropriated by external actors. This is particularly important given the real and important differences between undergraduate, professional, and graduate education, which are not always fully appreciated by policymakers.

It is our hope that fuller access to program-level career pathways data might enable graduate deans to improve their programs, benchmark against peer institutions, attract better-fitting graduate students, retain those students already enrolled, and communicate better with faculty and external stakeholders. Furthermore, such information may enable programs to better align the preparation graduate students receive with the real outcomes of the participants in the program. Rather than orienting doctoral training around a singular goal, it can only strengthen graduate education for students, faculty, employers and policymakers to understand the full range of careers available to a student upon completion of the PhD. This knowledge should improve programs in such a way as to allow students to develop a portfolio of skills necessary for success both within and beyond academia.

By Maureen Terese McCarthy, Assistant Director of Advancement and Best Practices

References


Dissertation Boot Camps, Write-Ins, and Writing Retreats

For several decades there has been general agreement that graduate students are more successful when they have supportive and effective mentoring. Yet over the past decade or so, the increasing expectations for teaching and student engagement, research, publishing, securing research funding, and engaging in university service have made it difficult for faculty to provide consistent and effective mentoring to all graduate students in their programs. As a result, mentoring accessibility and effectiveness can be highly variable across individual faculty and programs.

Given the evidence that good mentors can have a critical impact on students’ confidence, competence, degree completion, and career, there’s an irony in that, at the point that students may feel the most anxiety and pressure to complete their degree, they receive (or perceive) the message, “Now go away and write. Contact me when you have a chapter (or two or all of them) ready for me to read. Good luck with that.” Whatever sense of community that new student orientation events, coursework with one’s entering cohort, or qualifying exam success and entering the ABD club have engendered, the independence expected of most students, especially in the humanities and the social sciences, at the thesis and dissertation stage only increases the stress and isolation reported by graduate students when they begin to write their thesis or dissertation.

Cornell is one of many graduate schools that have begun to address the need for writing support, advice, and peer mentoring at this critical stage through Dissertation, Thesis and Proposal Writing Boot Camps.\footnote{Our events are designed to be “inward-focused” boot camps, versus “outward-focused” boot camps (Simpson, 2013). The former are part of a more comprehensive effort to provide writing support across programs using multiple approaches; the latter often “lack strategic planning and explicit discussion of program goals with students and university stakeholders” (p. 2). Lee and Golde (2013) from Stanford University have also described this model as “Writing Process” as opposed to “Just Write” events. In the former, students consider their writing process, identify and use effective strategies, and overcome the challenges in conversation with fellow boot campers, facilitators, and writing consultants. The latter, “Just Write” events, support students’ writing productivity by providing space, food, and structured time.}

At Cornell our goals include helping students to

- identify and use strategies that increase writing productivity and lead to successful, timely degree completion;
- reflect on their individual writing process and habits resulting in an individualized strategic plan for writing that includes daily goals, interim deadlines, target completion date as well as effective strategies for managing time, work, self, and advisor;
- create an ongoing peer writing support community so that students continue their productive and successful writing post-Boot Camp.

For each boot camp we accept applications and invite up to 60 students to attend. To allow as many students as possible to participate, we have overlapping groups, with staggered start dates and times, of 10 to 15 students. For example, we start a dissertation group on Friday morning, another dissertation group on Friday afternoon, a thesis group on Monday morning, and a proposal writing group on Monday afternoon. All groups come together only at lunch and include guest speakers; popular topics include wellness and work-life balance, data and information management, and the graduate school’s thesis submission process.

We provide writing space, breakfast and lunch, appointments with writing and statistical consultants, mid-week neck massages (by a therapist, not a dean) as well as a Stress-Free Zone (with crafts, hand-weights, and exercise bands). An essential component that establishes the foundation of what happens at boot camp and beyond is the introduction/orientation that occurs on the first day. Students introduce themselves with a two-minute synopsis of their research and the stage and status of their writing. Following introductions, students share their writing goals for the week as well as any challenges at this point in their writing and degree completion. The facilitator suggests strategies for overcoming these obstacles that often delay or stop students’ productivity and progress. (Their participant handbook includes a list of 30 such strategies, titled “The Boot Camp Way.”) It’s not unusual at this first meeting for students to offer their own experiences and strategies to their peers. This supportive community-building continues in daily goal-setting and check-in meetings (20 to 60 minutes). By the third day students decide if they want to have their team meeting without the facilitator.

From both formal assessment and anecdotal information, we knew that boot camps are effective. Students report that, although the advice and encouragement, guest speakers, and the non-stop food buffet are appreciated, the most valuable part of boot camp is being part of an ongoing writing support following boot camp. Indeed, following the first boot camp (both
at Columbia and Cornell), we began to schedule Write-In events for students to return and write together as a group. (As word spread, we opened the write-ins to all graduate students who wanted a quiet writing space, not just those who had participated in boot camp.) At Cornell, our write-ins occur every morning, Monday through Friday, from 8:00 a.m. to 11:00 a.m. in our graduate student center. (We host a once-a-month "Re-Boot" for boot camp alums for both writing and outcome data-gathering purposes.)

Our boot camps have been replicated in Cornell’s disciplinary graduate programs (and some include both student and faculty writers). A new model we are piloting this semester during spring break may be even more easily replicated by departments; the Writing Retreat includes up to 10 groups (of five students each) that will be student-facilitated.

What the Deans Learned at Boot Camp
We have discovered a number of outcomes, both planned and unanticipated, about Boot Camp.

• Students appreciate the diversity of disciplines in their groups for several reasons. One rule of boot camp is, "What happens at boot camp stays at boot camp!" We promise confidentiality, and students speak candidly about their struggles and fears. They also are surprised at how many of their own experiences and struggles are shared by other students, even in different disciplines. We frequently hear, “I didn’t know anyone else had my problem.” The writing pairs and small groups that continue maintain this multidisciplinary composition both for the support and the relative anonymity that non-departmental peers provide. Stage diversity is also beneficial. Students beginning their writing learn from experienced peers. More experienced peers discover they have advice to share, which serves as a confidence-booster for them.

• Boot camp taught us the value of communal writing space for graduate students. The Write-In quiet space (Boot Camp rules apply) with coffee (and occasionally food) allows students whose work schedules or family commitments don’t permit them to attend a week-long event to join a peer writing community. For these come-and-go sessions, students sign in with their name and writing goals. When they depart, they indicate how long they wrote and whether they accomplished their goals; this creates accountability and underscores students’ commitment to their writing and degree completion.

Whether sponsored by the graduate school, Writing Center, or in collaboration with multiple campus partners, boot camp by any name using any model can be effective in promoting degree completion and helping students to develop a peer writing community. We at Cornell encourage others to develop, and share with the expanding boot camp community, your institution-specific model for writing support and peer community building.

By Jan Allen, Associate Dean for Academic and Student Affairs, Graduate School, Cornell University

For a copy of Cornell’s Boot Camp Guide (with participant handbook, application, assessment survey and information about additional Graduate Schools’ Boot Camp models), email Jan.Allen@cornell.edu.

References


Endnotes
1Cornell’s model is an expanded version of Dissertation and Proposal Writing Boot Camps for doctoral students at Columbia University (2009-2012) where the author was Associate Dean for PhD Programs (2005-2012).
Background

Institutions participating in the Council of Graduate Schools’ (CGS) Enhancing Student Financial Education project, which is funded by TIAA-CREF, are carrying out a number of activities, one of which is the implementation of the Student Financial Perspectives Survey. This survey is a pre- and post-intervention survey intended to help determine the extent to which financial education programming leads to changes in graduate students’ attitudes and behaviors concerning debt, finances, and financial education. The pre-intervention survey was fielded by partner institutions in the fall of 2013 and it will be fielded again in the fall of 2014.

All 15 partner institutions fielded the survey in the fall of 2013, and although data are still being cleaned and prepared for the official report, some preliminary findings offer some early insights into the attitudes and behaviors of graduate students with respect to their awareness of money management and financial education programming. This article refrains from presenting official counts and percentages, with the exception of the information presented in Table 1, given the fact that the data have not yet been fully cleaned. Furthermore, this article also only reports rough estimates based upon usable responses. Future GradEdge articles and other publications and resources will provide the official portrayal of the data in the future.

Table 1: Preliminary Respondent Enrollment Status, Fall 2013

<table>
<thead>
<tr>
<th>Degree objective</th>
<th>Percent (preliminary)</th>
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<tbody>
<tr>
<td>Enrolled in a master’s program</td>
<td>54%</td>
</tr>
<tr>
<td>Enrolled in a PhD program</td>
<td>36%</td>
</tr>
<tr>
<td>Enrolled in any Enr graduate program</td>
<td>9%</td>
</tr>
<tr>
<td>Not currently enrolled in a graduate program</td>
<td>1%</td>
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Highlights

The Fall 2013 iteration of the Student Financial Perspectives Survey generated roughly 13,500 responses from 15 partner institutions. As shown in Table 1, the preliminary findings suggest that more than one-half (54%) of respondents were enrolled in a master’s program at the time of the survey, while roughly one-third (36%) of respondents were enrolled in a PhD program. Approximately nine percent of survey respondents were enrolled in neither a master’s nor a PhD program.

Roughly two-thirds of respondents started their graduate program in either 2012 or 2013. More women responded than men, and considerably more respondents were U.S. citizens and permanent residents compared to temporary residents. More than one-half of respondents were single.

About one-half of student respondents did not have any debt prior to entering their graduate program. Among respondents with prior debt, about one-in-five felt that their prior student debt was “average” in comparison with others. The survey asked respondents to assess the impact that prior student debt had on their decision to enter their current graduate program, and this will be one of the more interesting sets of data that the project expects to explore in the project.

Respondents were asked about the sources from which they received information about how to finance their graduate education prior to admission. Respondents were asked to select any or all of five choices, and a very high percentage of respondents noted that they did not receive information about financing their graduate education prior to admission. Among those that did receive such information about financing their graduate education, the graduate program and the graduate institution (i.e., financial aid office, graduate school, etc.) were the most frequently cited.

One point of interest in understanding the attitudes and behaviors of graduate students with respect to financial education is understanding where graduate students seek information. When asked where they go first to find answers to questions about general financial issues (e.g., paying bills, creating budgets, understanding credit, etc.), more than one-third of respondents to the survey indicated that they reach out to either parents/family or partner/spouse. About one-in-five respondents use media, such as the internet, books, and news to answer general finance questions. Although the “millennial” generation (which includes those graduate students under 30) are often described as reliant on friends and peers as primary sources of information for a range of issues, less than one-in-ten respondents said they would go first to friends or peers with questions about general financial issues. About one-in-ten have not sought information on these topics. When asked how they go first to find answers to questions about managing student debt, roughly two-in-five respondents indicated that they reach out to parents/family or partner/spouse. The survey also found, however, that about one-third of respondents have not sought answers to questions about student debt.

More than one-half of students responding to the survey have not taken a course or attended a workshop, speaker series, etc. on managing personal finances. Only about one-third of survey respondents were aware of counseling/consultation, programs, seminars, and/or courses in personal financial education available to them at their institution. Only a very small percentage of respondents have participated in these kinds of financial
education offerings. Similarly, roughly one-in-five respondents are aware of courses, workshops, webinars, brown bag lunches, etc. that specifically address graduate students personal finance issues. Only a very small percentage of about one-in-five respondents have participated in these activities.

The preliminary findings generated by the Student Financial Perspectives Survey suggest that there are significant opportunities for the graduate community to enhance the financial knowledge, attitudes, and behaviors of graduate students. Levels of awareness of and participation in financial education offerings could certainly be increased from their current levels. The findings also suggest that there is an opportunity for the graduate community, perhaps working in tandem with higher education leaders, to provide more general information to students about financing a graduate education prior to their admission to graduate programs. It is also important to note that preliminary findings indicate that approximately two-thirds of respondents were either very confident or confident that their future earnings will allow them to repay current student loan debts within 15 years, and that about four-in-five respondents feel confident about their ability to manage their own finances. If true, the seemingly high level of confidence in their future earnings potential and ability to manage their own finances will need to be taken into consideration when developing and promoting financial education resources.

Data generated by the pre- and post-iterations of the Student Financial Perspectives Survey, along with data from the Survey of Financial Standing, which will be implemented by research partner institutions this spring, will provide a rich dataset with the potential to provide insight into the current financial standing of graduate students, and shed light on the extent to which financial education programming leads to changes in graduate students’ attitudes and behaviors concerning debt, finances, and financial education. CGS expects that these data, which will be examined in aggregate as well as by degree objective, broad field, demographic and other characteristics, will provide a valuable resource for graduate institutions nationwide.

By Jeff Allum, Director, Research and Policy Analysis with contributions from Daniel Denecke, Associate Vice President, Programs and Best Practices and Keonna Feaster, Program Manager, Best Practices

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