The ambitious effort of the NRC Assessment of Research Doctoral Programs to compile ratings across many fields and hundreds of universities has highlighted the difficulty of assembling the broad base of accurate data essential to measuring graduate program success. Nonetheless, the importance of documenting consistently and then improving on these measures is acknowledged by most in the field. Indeed, initiatives focused on a few fields and a few dozen universities for a limited time, e.g., the CGS PhD Completion Project, have succeeded and, in the process, defined conclusively the appropriate data. Similarly, the long-standing Survey of Earned Doctorates of the NSF and AAUDE Data Exchange have demonstrated means of compiling data on satisfaction with programs and early careers. The results of the NRC Assessment have generated conversations about program metrics on many campuses across the country. Perhaps one of the most valuable contributions of the NRC Assessment is that it has stimulated interest in using and reporting data not just within but also across institutions. At a session during the CGS Annual Meeting in Washington, DC, the authors shared the ways the NRC data are used at Princeton University, the University of California, Davis and the University of Michigan.

**Princeton University**

In meeting with departments to discuss the state of their programs the Graduate School at Princeton University shares admissions, enrollment, completion, and placement data that compares them with other departments in their division. Increasingly Princeton also has survey data, e.g., a Graduate Student Satisfaction Survey (every 3 years) and an Exit Survey that complements the Survey of Earned Doctorates. Ideally the Graduate School would have comparable data and surveys from similar programs at peer institutions, but instead the Graduate School and the department normally have only intuitive or anecdotal information about competitors in other institutions. Nonetheless one-on-one meetings with the chair and director of graduate studies generate lively discussions of the data, during which the Graduate School may apply pressure on them to address perceived shortcomings or, more likely, they recognize problems in their programs from the survey or quantitative data and brainstorm means for addressing it. For example, about five years ago the Graduate School met with a first class humanities department whose time-to-degree and completion percentages were inconsistent with their overall quality. After some to and fro, the chair announced that he had a plan to restructure the program and bring the time-to-degree down to 5.2 years. Last year they hit that mark on the nose! This past year the Graduate Student Satisfaction Survey plus the normal data was shared with a department in engineering. The survey suggested somewhat less enthusiasm about courses, little support among faculty beyond the adviser, sometimes too heavy a hand from the adviser, and fewer early opportunities in research, all of these measured relative to other engineering departments. The chair and director of graduate studies instantly recognized that the cause of the symptoms identified by the survey lay in an curriculum that needed updating, a process of matching students with faculty that was not working so well, and a couple of heavy-handed advisers. They left the meeting with clear thoughts about how to restructure the first year to address the situation.

Ideally such reviews would happen annually but even at a small university like Princeton that is not feasible. Nonetheless good data that the Graduate School can review annually can help spot problems or formulate generic measures for improvement.

**University of California, Davis**

At the University of California, Davis, the Office of Graduate Studies has prepared program specific reports using the NRC data. These reports summarize relevant data to aid in understanding why each program received its particular score in each of the rankings and dimensional measures and to providing comparisons of each program with all other programs in the same field. In addition, each program was asked to identify 5-10 comparison programs at other institutions prior to the release of the NRC data. The program specific reports include data for these comparison institutions. In many cases, the comparison programs appear to have similar results in the
NRC assessment, whereas other cases suggest that these comparison programs are, in fact, not comparable to the UC Davis counterpart program. The NRC data are being used in combination with advancement to candidacy percentages, 7- and 10-year completion percentages, and times-to-degree calculated from the data submitted to the NRC. Regularly reported admission profiles for each program round out the data reports.

All of this information is being shared with the faculty in each program. The goal is not to focus on the NRC rankings, but rather to understand why each program was ranked as it was and to consider whether that understanding leads to useful ideas for ways to improve the program. More broadly, sharing the collection of data is intended to stimulate discussion among the faculty to identify what each program values and what strategies will improve the outcomes and quality of the program. The further goal is to provide a foundation for more regular quantitative assessments of programs using agreed upon metrics.

Although many in the academic community have argued that the data are outdated or inaccurate, the NRC Assessment provides a useful starting point for identifying data of interest. Where the NRC calculations focus heavily on research characteristics and faculty productivity, especially in the R rankings, most graduate deans have greater interest in measures of student outcomes and success. In this spirit, the Office of Graduate Studies at UC Davis is developing a metric based on six of the NRC variables that are of specific interest: percent completing, median time to degree, percent minority students, percent female students, average GRE-Q, and percent national fellowships.

University of Michigan

At the University of Michigan, the Graduate School regularly shares data about admissions, enrollment, completion, time to degree, diversity, funding, and placement with each degree-granting program or department. These data are supplemented with results from surveys of current students and recent graduates (collected via an exit survey done after completion). The Graduate School provides explicit comparisons of each graduate program with other programs in their academic school or college, with other programs in the broad field (e.g., biological and health sciences, or humanities), and with the University of Michigan as a whole. These comparisons allow the faculty members who are responsible for graduate programs to see how they compare with similar programs on campus, but not how they compare with their peers in the same discipline at other universities. Often the faculty have a strong desire to compare their programs with other universities, but data are not readily available to make straightforward comparisons. The Graduate School had hoped that the NRC Assessment would provide the data to make many such comparisons, using common definitions of important variables.

Given the many difficulties the University of Michigan experienced associated with the NRC data collection, inconsistencies in the application of the taxonomy, and unresolved issues of comparability across institutional definitions, only a small number of variables were found that allowed straightforward comparisons between Michigan’s programs and those at peer institutions. For each of Michigan’s doctoral programs that participated in the NRC study, variables were pulled for a set of peer institutions. The university’s institutional research office has defined a set of peer institutions that the university routinely chooses for comparison. For each of those peers, the Graduate School looked at percent of first year students with financial support (even though there is considerable ambiguity about how much support was offered by each institution), percent of students who completed in six years or less (eight years in the humanities fields), median time to degree, percent with academic plans after graduation, average number of PhDs graduated, percent of underrepresented minority faculty, and percent of underrepresented minority students. This information was shared with each program that participated in the study, and discussed with them. While having this comparative information for the 2005-2006 academic year was not timely, it did provide some helpful context for programs in thinking about their relative strengths and aspirations.

Conclusion

While each institution is using a broad collection of data to identify strategies for improving doctoral education, without some commonality in how data are defined and collected across institutions, it is difficult to know how a program compares to others in the same field. In the conversation following the presentations at the Annual Meeting, several ideas were proposed for continued efforts to coordinate data collection across institutions. The AAU Graduate Deans have developed an exit survey instrument and recommended its adoption by all of the members of the AAU; this would permit institutions to share results with one another on identical questions. Another suggestion by George Walker of Cleveland State University is for CGS members to agree on a set of data elements that each university would post prominently on its web pages to inform prospective graduate students. An appropriate set of statistics might include admissions selectivity and yield, enrollments and degrees awarded (separate for PhD and master’s), percent completion, median time to degree, diversity (percent of underrepresented minority students and women), and initial placement. Some universities are already doing a version of this, including Duke [http://gradschool.duke.edu/about/stats.php], Yale [http://www.yale.edu/graduate-school/academics/profiles/graduate-school.pdf], and Northwestern [http://www.tgs.northwestern.edu/pgm_stats/]. These examples serve as a starting point for developing an agreement on the data elements that CGS member institutions might share.

By William B. Russe, Dean of the Graduate School
Princeton University; Jeffery C. Gibeling, Dean of Graduate Studies, University of California, Davis; and Janet A. Weiss, Dean of the Graduate School, University of Michigan
Data Sources: Higher Education Continues to Lead to Higher Earnings, but Disparities Remain

Through the Current Population Survey (CPS), a monthly sample survey of approximately 60,000 households across the United States, the US Census Bureau and the Bureau of Labor Statistics (BLS) collect data on the education level of the US population and the income of employed individuals. The findings from the 2010 CPS surveys confirm that individuals with advanced degrees continue to earn more on average than individuals with lower levels of educational attainment.

In 2010, among full-time employed wage and salary workers 25 years of age and older, the median usual weekly earnings of individuals with advanced degrees (master's degrees, doctorates, or first-professional degrees) were $1,351 (Bureau of Labor Statistics, 2011a). This compares with median usual weekly earnings of $1,038 for individuals with a bachelor's degree as their highest degree and $626 for individuals with only a high school diploma (see Figure 1). This wage premium means that individuals with advanced degrees earned 30% more in 2010 than individuals with a bachelor's degree as their highest degree and more than twice as much as individuals with only a high school diploma. Overall, the median usual weekly earnings of all wage and salary workers 25 years of age and older was $782.

While advanced degree holders earned a median $1,351 per week in 2010, there were large differences by gender and race/ethnicity. Overall, men with advanced degrees earned about 34% more than women with advanced degrees—$1,552 for men versus $1,158 for women (Bureau of Labor Statistics, 2011a). By race/ethnicity, Asian and white workers with advanced degrees earned more than their Hispanic/Latino and Black/African American counterparts (see Table 1). Median usual weekly earnings ranged from a high of $1,466 for Asian workers to a low of $1,065 for Black/African American workers. Within every race/ethnicity category, men earned more than women (see Table 1). White men earned about 35% more than white women, and Hispanic/Latino men earned about 23% more than Hispanic/Latino women. Black/African American men also earned more than Black/African American women, but the wage premium was smaller than in other race/ethnicity categories, with Black/African American men earning 16% more than Black/African American women. Among all workers with advanced degrees, Black/African American women had the lowest median weekly earnings at $1,010, and white men had the highest median weekly earnings at $1,552, about 54% more than the median weekly earnings of Black/African American women.

Among advanced degree holders, the wage premium for men has remained relatively constant over the past decade. In 2000, the median usual weekly earnings of men were 33% higher than the median usual weekly earnings of women—$1,172 versus $881 (Bureau of Labor Statistics, 2011b). A decade later in 2010, men with advanced degrees earned 34% more than women with advanced degrees as noted above, virtually the same wage premium as in 2000.

While the wage differences by gender have remained relatively constant over the past decade, wage differences by race/ethnicity have shifted (see Figure 2). In 2000, the median usual weekly earnings of Asians with advanced degrees were 23% higher than the median usual weekly earnings of Hispanics/Latinos ($1,129 versus $919) (Bureau of Labor Statistics, 2011b). But by 2010, the wage premium for Asians decreased to 18% ($1,466 for Asians versus $1,241 for Hispanics/Latinos), indicating that wages increased faster for Hispanics/Latinos than for Asians over the decade thereby decreasing the gap. Similarly, the median usual weekly earnings for whites with advanced degrees were 13% higher in 2000 than the median usual weekly earnings for Hispanics/Latinos ($1,034

### Figure 1. Median Usual Weekly Earnings by Educational Attainment, 2010 Annual Averages

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>Men 2010</th>
<th>Women 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$1,351</td>
<td>$1,158</td>
</tr>
<tr>
<td>Bachelor's Degree Only</td>
<td>$1,038</td>
<td>$881</td>
</tr>
<tr>
<td>Some College or Associate Degree</td>
<td>$734</td>
<td>$526</td>
</tr>
<tr>
<td>High School Graduate, No College</td>
<td>$444</td>
<td>$306</td>
</tr>
<tr>
<td>Less than a High School Diploma</td>
<td>$782</td>
<td>$526</td>
</tr>
<tr>
<td>Total, 25 Years and Older</td>
<td>$1,065</td>
<td>$881</td>
</tr>
</tbody>
</table>

Notes: Includes full-time employed wage and salary workers in the US 25 years of age and older. Source: Bureau of Labor Statistics, 2011a

### Table 1. Median Usual Weekly Earnings of Advanced Degree Holders by Gender and Race/Ethnicity, 2010 Annual Averages

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Total 2010</th>
<th>Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$1,351</td>
<td>$1,158</td>
<td>$1,552</td>
<td>$1,158</td>
</tr>
<tr>
<td>White</td>
<td>$1,368</td>
<td>$1,169</td>
<td>$1,578</td>
<td>$1,169</td>
</tr>
<tr>
<td>Black/African American</td>
<td>$1,065</td>
<td>$1,010</td>
<td>$1,176</td>
<td>$1,010</td>
</tr>
<tr>
<td>Asian</td>
<td>$1,466</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>$1,241</td>
<td>$1,126</td>
<td>$1,387</td>
<td>$1,126</td>
</tr>
</tbody>
</table>

Notes: Includes full-time employed wage and salary workers in the US 25 years of age and older with an advanced degree (master's, doctorate, or first-professional degree). N/A = Not Available. The CPS is a sample survey, and the numbers of Native Americans in the sample were too small to make reliable estimates. Source: Bureau of Labor Statistics, 2011a
versus $919), and the wage premium for whites decreased to 10% in 2010 ($1,368 for whites versus $1,241 for Hispanics/Latinos).

Not all of the shifts by race/ethnicity were in positive directions; Blacks/African Americans with advanced degrees lost ground on earnings over the past decade compared with their Asian and white peers. In 2000, Asians with advanced degrees earned 33% more than their Black/African American peers ($1,129 versus $851); in 2010, Asians earned 38% more ($1,466 versus $1,065). Whites with advanced degrees earned 22% more than their Black/African American peers in 2000 ($1,034 versus $851); in 2010, they earned 29% more ($1,368 versus $1,065). While median earnings for Blacks/African Americans with advanced degrees increased overall between 2000 and 2010 in current dollars, this gain was outpaced by the gains for Asians and whites. Furthermore, Blacks/African Americans experienced a decline in median earnings in 2009 and 2010 during the recession, thereby adding to the wages differences between Blacks/African Americans and Asians and whites.

The data from the CPS clearly show that higher education is a gateway to careers with higher-earnings potential, but they also reveal that disparities remain in earnings by gender and race/ethnicity. It is important, however, to note that the figures presented in this article do not control for field of study, occupation, length of professional employment, and other variables that might explain some (but not all) of the differences in earnings by gender and race/ethnicity.

Two factors in particular contribute to lower median earnings for women than for men. First, women with advanced degrees are more likely than men to be employed in some occupations in which salaries are lower, such as teaching, and less likely to be employed in some occupations with higher median salaries, such as engineering (Bureau of Labor Statistics, 2010). Second, women comprise a larger share of new employees with advanced degrees today than they did even a decade ago. In 1999-2000, women earned 58% of all master's degrees and 44% of all doctorates; by 2008-09 (the latest year for which data are available) they earned 60% of all master's degrees and 50% of all doctorates (Council of Graduate Schools, 2010). This means that women are more concentrated than men in the portion of the advanced degree workforce that is younger and has fewer years of professional experience. This portion of the workforce tends to have lower earnings than older, more experienced workers.

Similarly, underrepresented minorities (Native Americans, Blacks/African Americans, and Hispanics/Latinos) are also more concentrated in the younger and less experienced portion of the advanced degree workforce. In 1999-2000, underrepresented minorities earned 14% of all master's degrees awarded to US citizens and permanent residents and 11% of all research doctorates, compared with 18% of the master's degrees and 13% of all research doctorates in 2008-09 (National Science Foundation, 2010 and 2011).

While differences in earnings by gender and race/ethnicity are evident in the CPS data, what is also evident is that regardless of gender or race/ethnicity, individuals with advanced degrees earn a higher median salary than their counterparts with lower levels of educational attainment. Advanced degrees do not guarantee higher wages, but they are often the pathway to occupations with greater economic rewards.

By Nathan E. Bell, Director, Research and Policy Analysis

References


The McNair Scholars Program was founded in 1986 as a US Department of Education TRIO program, and is now funded at 194 institutions across the United States and Puerto Rico. The program, named in honor of astronaut Ronald E. McNair, is designed to prepare undergraduate students for doctoral studies through involvement in research and other scholarly activities (such as presenting at academic conferences). McNair participants are either first-generation college students with financial need, or members of a group that is traditionally underrepresented in graduate education and have demonstrated strong academic potential. Although the intended goal of the McNair Scholars Program is to increase graduate degree awards for students from underrepresented segments of society, skills gained from navigating the core components of the program have translated into numerous alumni success stories that extend far beyond the completion of a particular graduate program. Perhaps most inspirational to those involved in higher education is when McNair Scholar alumni enter the professoriate.

Professor Perry Singleton, currently an Assistant Professor of Economics in the Center for Policy Research at Syracuse University, was a McNair Scholar at the University of Illinois at Urbana-Champaign, where he received his B.S. Finance. His McNair program director was Michael Jeffries, and Jeffries’ passion for the program, the program goals, and for the students, was infectious. The personal connections gained from the McNair program were also invaluable, as the “sense of family” forged during the summer provided a crucial foundation of peer support.

Before Singleton joined the McNair program at the University of Illinois, he anticipated working for a bank upon graduation, but his McNair experience changed his mind. Although he hadn’t been thinking of graduate school, he soon planned to pursue a PhD in Economics, and crammed his senior year with the mathematics and economics courses he would need in order to make his application competitive. Under the auspices of McNair, Singleton also began to work with a faculty advisor for the first time, and as he notes, “With a huge school like that, I wouldn’t have had that opportunity without McNair, and it was life-changing. Thinking about it almost makes me want to turn around and do it all over again.”

Singleton’s undergraduate McNair research project was an examination of the purchasing power parity theory, using gasoline prices. It was the first time he had completed a data-research project with a statistical regression, and the excitement of uncovering the unknown attracted him deeply. Subsequently, he presented his work at a McNair research conference in Knoxville, TN, winning second place for the conference for best overall research. Through this experience, Singleton discovered he enjoyed talking about his research with other people. Importantly, the conference also gave him insight on what it was like to be an academic, with its discipline-specific focus and debate centered on the validity of people’s arguments.

Singleton, of Cherokee/Blackfoot descent, slowly realized that he wanted to go into academia, especially as he felt he had a unique voice and perspective. However, his heritage was not always as valued as he might have hoped. For example, he initially wanted to center his research on indigenous populations, but being indigenous, he was told by his advisor that he would be pigeonholing himself. He navigated the rigorous first-year microeconomics and macroeconomics courses (only 60% pass on their first attempt) through tenacity, hard work, and by studying with friends in the class, and in August of 2007 he received his PhD in Economics from the University of Maryland at College Park. Singleton noted that despite the challenges of graduate school, “It’s hard work, dedication, and passion for your subject that’s going to get you through everything that is thrown at you in grad school or as a professor. If you’re not passionate about your subject, you won’t be able to overcome that. They weed out whoever isn’t passionate about their subject. Think about your passion when you become discouraged. Don’t give up.”

After his graduation, he moved to New York to accept a position as a junior faculty member at Syracuse University. Currently on research leave, he is based at the Social Security Administration in Washington, DC, where he is utilizing Social Security data to examine intersections between lifetime earnings and disability, especially the effects of health on labor market outcomes, and the implications of this link for the optimal design of disability insurance programs.

As Singleton reflects on how his McNair experience impacted his life and career, he summarized: “As an economist, we’re taught to consider the counterfactuals. And in the terms of the McNair program—in terms of a counterfactual world without McNair—I wouldn’t be here. I think that’s a shame, but it speaks directly to the importance of the McNair program. McNair connects to low-income students or students of color, and opens up a world to them. McNair makes them feel like these careers are options for them. I’m grateful it was there for me, because I would not be who I am today.”

by Eileen Strempel, Associate Dean, Graduate School, Syracuse University

**CGS Gustave O. Arlt Award Deadline Approaching**

The deadline for the 2011 Arlt Award in the Humanities for a book on English and North American Language and Literature is April 1. Information and nomination procedures are available on the CGS website.
Welcome New Members

Regular Institutional Members

Felician College

University of Western Ontario

CGS Invites New Members

CGS invites proposals for grants to participate in a project on “Completion and Attrition in STEM Master’s Programs.” Through this Alfred P. Sloan Foundation-funded project, five CGS member institutions will be selected competitively and provided grant funds to:

- collect data on completion and attrition in master’s degree programs in STEM fields;
- administer surveys to entering master’s students, graduates, and those who do not complete their degrees;
- administer a survey to graduate program directors (or equivalent); and
- host site visits in which CGS project staff will conduct focus groups with students as well as interviews with graduate deans, graduate program directors, and other university personnel to better understand reasons for enrollment, factors that contribute to student success, and promising practices to improve completion.

The RFP and templates required for proposal submission are available on the CGS website, www.cgsnet.org (see the link in the lower left-hand corner of the main CGS webpage). Please contact Nathan Bell (nbell@cgs.nche.edu or 202-461-3886) for further information about this opportunity.

Deadline for proposals: Friday, May 13, 2011

Welcome New Staff

Jeff Allum joined the Council of Graduate Schools in January 2011 as a research associate. Among other things, he is supporting research efforts pertaining to Professional Science Master’s (PSM) programs and completion and attrition in science, technology, engineering, and mathematics (STEM) master’s programs. Jeff comes to CGS from the American Chemical Society where he spent more than three years performing and managing an array of educational, employment, salary, and member research efforts. Over the course of his career, Jeff has conducted research and supported projects on topics such as occupational skill standards and certifications, business/education partnerships, and youth development. He has worked and studied both domestically and internationally, and he has been an instructor of education policy at the graduate level. Jeff received his Ed.D. and M.A. degrees in education policy from George Washington University and holds a B.A. from Michigan State University.

The Role and Status of the Master’s Degree in STEM (2010)

The Role and Status of the Master’s Degree in STEM presents the current state of knowledge about master’s education, with a focus on completion and attrition in STEM. This publication illustrates the rapid growth and important role of master’s education in the graduate education enterprise, and shows the responsiveness of master’s degrees to current workforce needs that emphasize globalization, creativity, adaptability, and diversity as we transition into a knowledge economy. It also points to future research directions for fostering innovation and ensuring our competitiveness as a nation.

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The Yeates School of Graduate Studies at Ryerson offers close to 50 innovative, leading-edge and career-oriented graduate degrees at both the master’s and doctoral levels to over 2,100 students. They include a rich diversity of professional and course-based programs, as well as research-intensive thesis-based programs, many with an exciting interdisciplinary focus. All of the Yeates School programs are designed to include a high degree of interaction among faculty members and graduate students, and to have a strong component of scholarship/research/creative activity, in order to prepare graduates to embrace the opportunities and challenges of the 21st century global society. Growth in graduate studies continues to reflect exceptional levels of student response to the outstanding quality and relevance of the School’s programs.

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The search committee will begin to consider potential candidates immediately and will continue until the position is filled. Applications should include a letter of introduction, curriculum vitae, and the names of three references (who will not be contacted without consent of the candidate) and be forwarded electronically, in confidence, to Laverne Smith & Associates Inc. at RyersonYeates@lavernesmith.com