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PFF Model Can Help Institutions Meet Assessment and Accountability Needs

The lead article in the April 2010 Communicator described a new CGS project to explore the potential for integrating skills and expertise in the assessment of student learning into programs that prepare graduate students for higher education faculty careers. A new CGS publication from that project, Preparing Future Faculty to Assess Student Learning (2011), examines the place of outcomes assessment in the US national context of higher education accountability and quality improvement, as well as the role of undergraduate student learning assessment in the graduate school mission. The new CGS report also discusses the results of a project-funded survey and fall 2010 workshop, which convened graduate deans, learning assessment experts, and recent student participants from PFF and PFF-like programs in Washington, DC to discuss promising program features and identify key challenges and future opportunities for enhancing national efforts. The following article includes extracts from the 2011 publication and provides highlights from survey results and workshop discussion.



Preparing Future Faculty (PFF) programs have introduced some of the most influential graduate education reforms in recent decades. When PFF programs began in the early 1990s, they responded to two broad challenges facing US higher education: a lack of professional development opportunities for doctoral students seeking academic careers, and public concerns about the quality of undergraduate higher education. With external funding from four national funding bodies over a decade, and national leadership from the Council of Graduate Schools in partnership with the Association of American Colleges and Universities and 11 disciplinary societies, programs were created at 43 doctoral institutions collaborating with 300 partner institutions including liberal arts colleges, master's-focused institutions, minority serving institutions, and community colleges. PFF programs have since evolved to ensure that they continue to prepare participants for success as faculty of the *future*. While the core responsibilities of faculty have remained fairly constant, new technologies, new modes of delivery, and changing demographics have required these programs to adapt.

One growing expectation of faculty is that they are skilled in defining and using "student learning outcomes," i.e., explicit statements of generic skills and abilities and disciplinary competencies that a student is expected to have acquired as a

result of successfully completing a course, a coordinated set of core courses, or other activities including co-curricular experiences. The definition and use of student learning outcomes is now commonly required at both undergraduate and graduate levels. These expectations can help faculty evaluate the level of student learning and engagement and develop a better sense of how a particular course or activity fits in to the overall educational mission of the institution. Such requirements can encourage faculty to reflect on their scholarly responsibilities beyond research, as teachers, and to experiment with new teaching approaches to enhance learning inside their classrooms. They can also be used to enhance the activities of all those working to provide a rich learning environment at their institution whether as mentors, lab and program directors, or administrators.

Student learning outcomes received little attention when universities first developed PFF programs, though the use of research on learning to inform teaching was an important part of the "scholarship of teaching and learning" paradigm that informed several PFF programs. Today, however, learning outcomes are at the center of national discussions about higher education accountability (Benjamin and Chun 2003, Shavelson and Huang 2003, Adelman 2010, Banta 2007, Chun 2002). The federal government, regional accrediting bodies, state governing boards, and the higher education community are all now calling for greater public accountability and, specifically, for greater transparency and evidence of student learning. As a result, higher education faculty across different institutional contexts must devote a significant amount of time to assessing student learning in ways that are unfamiliar to many from their graduate training or past experience. Yet, despite their important role in the professional development of the nation's future faculty, PFF programs have been largely left out of national discussions about student learning assessment, where more emphasis has been placed on issues of how to define

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Preparing Future Faculty Programs

learning outcomes, which instruments to adopt, and how to satisfy institutional accountability requirements than on how to promote best practices and faculty expertise in assessing student learning.

The Preparing Future Faculty Model

The growth of PFF was guided by two principles. The first was that doctoral programs and degree-granting universities should prepare students for excellence as scholars in a broader sense than just research, and that PhD students who aspire to faculty careers should be prepared for the full range of roles and responsibilities they will encounter, including teaching, service, and research. The second principle recognized that PhDs are employed as faculty across a range of higher education institutions, that different types of institutions have different expectations and scholarly environments, and that preparing students to be aware of and prepared for those contextual differences is therefore good for the students, hiring institutions, and US higher education in general. While the PFF initiative has succeeded by many standards, the overarching principle behind PFF—that a doctoral degree should prepare students for career success—remains relevant today because the original issues that inspired their development remain.

Embedding Skills Development in the Assessment of Learning into Graduate Professional Development Programs

Preparing Future Faculty programs would seem to provide an ideal opportunity for introducing graduate students to the institutional expectations for learning assessment, skills and techniques in assessment, and broader issues about how and why student learning should be assessed as well as how results can be used to improve teaching and the curricula. Through a 2010 survey, we sought to better understand the extent to which preparation in the assessment of student learning may already be integrated into PFF programs and to identify opportunities for enhanced integration. We queried universities about the status and scope of their PFF programs, ways in which those programs have evolved, the degree of institutional collaboration, and other issues. Separately, we asked within the same survey about university resources and activities that were available to help faculty with student learning outcomes assessment and whether such resources and skills preparation were available to graduate students aspiring to faculty positions.

We sent the survey to 57 universities, including every university that received a PFF grant, every university that requested to be listed on the PFF National Office website (www.preparing-faculty.org) as having similar programs, and other universities with known professional development programs or sustained involvement in assessment. We sent the survey to graduate deans to oversee responses, but asked for input on the survey from project directors, staff, and campus experts who would be able to provide accurate responses to both areas of inquiry. We received 37 completed surveys (a

65% response rate), and an additional number of e-mail responses from institutions indicating that their PFF activities are no longer active.

The great majority of respondents (78%) reported that, over the past decade, requirements for faculty at their university in the assessment of student learning increased. Only 14% reported that such requirements stayed about the same, and none reported a decrease in such requirements. We also asked whether or not the development of student learning outcomes was integrated into structured professional development programs for graduate students aspiring to faculty positions. If the survey demonstrated that such integration was already in place, we also sought to gather information about opportunities for enhancing such integration and for bringing promising practices into the national dialogue. Survey results identified both opportunities and needs.

1. Most programs developed with seed money from the PFF initiative remain active. The majority of institutions (76%) described their PFF or PFF-like programs as currently “Active,” which we defined as: “continu[ing] to maintain an active professional development program with institutional partnerships and supervised teaching experiences and/or certificate/transcript recognition for student participation in a range of activities.” An additional 22% described their program as “Somewhat Active,” i.e., operating under “scaled back resources and/or activities” institutional partnerships, etc. since the original grant-funded period. Only 3% of those that returned completed surveys described their PFF or similar programs as “Inactive.” [It is noted, however, that responses to another survey question suggest that many have scaled back on-site supervised teaching experiences and other activities at partner campuses, as 41% or fewer respondents report active partnerships with each of five different types of institutions.]

2. Graduate schools provide strong leadership in PFF and similar programs. The majority of institutions (59%) described their programs as “centralized,” i.e., “open to graduate students from across the campus, focusing on issues that pertain to multiple fields and programs,” and 35% described theirs as “hybrid,” i.e., containing both centralized and program-specific components. By contrast, only 5% described their PFF activities as “program-specific,” i.e., housed in the departments or programs, including emphasis on issues specific to the field or program.” Three quarters (75%) of those respondents who described their “centralized or hybrid [programs] with centralized components” reported that their programs were housed in the graduate school or graduate college.

3. Graduate deans and other senior administrators are calling for accountability in the area of learning assessment. Presented with a variety of possible factors contributing to increased university requirements for student learning outcomes, 100% of respondents reported that “Strategic commitment of senior administration to improve quality of education” was either very important or somewhat important in prompting such

increased requirements, and 96% reported that both “Institutional/regional accreditation standards” and “Specialized or programmatic accreditation” were very or somewhat important in prompting increased requirements for faculty assessment of student learning outcomes.¹

4. *Some graduate students are receiving systematic preparation in student learning assessment in PFF programs.* Over two-thirds (68%) of respondents reported that “the development of Student Learning Outcomes (SLOs) and/or the assessment of student learning [is] an integral feature of [their] PFF or similar programs,” PFF programs exposed participants to assessment methods that included: classroom assessment techniques, use of technology to improve student learning, use of feedback from peer or mentor observation to improve teaching and learning, and use of learning assessment data to enhance syllabi or curricula; 86% of respondents reported that students in their PFF programs learned about “Development of Student Learning Outcomes for individual courses.”

5. *Faculty receive minimal preparation for student learning assessment through mostly passive materials and one-time orientation events.* By contrast to the exposure that some graduate students in PFF programs receive to student learning assessment issues and techniques, the survey indicated that faculty typically learn about Student Learning Outcomes through minimal, often one-time orientation materials and activities, such as: university-wide handbooks (54%) or program-specific handbooks (41%), and new faculty orientation or workshops (49%). Less than half reported that faculty learn about this kind of assessment from other “Resources provided to faculty by the graduate school and/or college dean” (38%) or by the office of institutional research (30%).

A CGS Workshop to Explore the Potential of Future Faculty Preparation Programs to Address National Needs in the Assessment of Student Learning

At the fall workshop, discussion probed the issues behind integration of student learning assessment into professional development programs, focusing on four areas:

- Creating a Culture that Values Learning Assessment
- The Broad Parameters of an Enhanced PFF Program
- Potential Curricular Content for Learning Assessment in PFF
- Assessing Success in Program Integration

Participants discussed many key challenges including: a gap between assessment scholarship and faculty practice, confusion about the purposes of assessment, and the need for greater campus coordination. Participants agreed that universities must be clear in addressing how assessment data will be used if they are to stimulate genuine faculty engagement in the assessment process. One dean at the workshop noted that while leaders at her university can effectively appeal to an openness to outcomes data, they must also not forget that the purposes of the data collection process must be transparent and focused on clearly defined goals: “[...] faculty are not very

interested in collecting data if it’s seen as bean counting or [mere] accountability.”

Effective strategies discussed for providing incentives and rewards that would encourage greater faculty engagement in student learning assessment fell roughly into six categories:

- (1) Link Assessment to Research and Scholarship;
- (2) Reframe the Concepts of Teaching and Learning;
- (3) Use Data to Demonstrate the Impact of Assessment;
- (4) Create Opportunities for Faculty Ownership and Leadership;
- (5) Develop and Improve Incentives for Faculty and Student Involvement; and
- (6) Connect Assessment to Professional Success.

One of the key challenges identified was the relatively small scale of existing programs. With few exceptions, even the most active PFF programs reach relatively small numbers of PhD students seeking faculty careers. In a report on strategies for encouraging greater faculty involvement, Pat Hutchings (2010) points to the CGS Teagle project as a promising approach to address this national need and notes that: “While forward-looking doctoral programs are now beginning to treat teaching as a more prominent part of professional formation, it remains true that reflecting on educational purposes, formulating learning goals, designing assignments and exams, and using data for improvement are activities that live, if at all, only on the far margins of most PhD students’ experience” (pp. 14, 9). Among the highest priority recommendations identified at the workshop included: scaling up current graduate student professional development programs, promoting new programs, and fostering greater cross-institutional dialogue about promising practices.

National Needs and Next Steps

The status and structure of current PFF and similar programs suggest strong potential for graduate dean and graduate school leadership in: working with faculty to meet requirements of regional accrediting bodies, shaping current national discussions of assessment and accountability, and leveraging programs to prepare graduate students in learning assessment to address the needs of current faculty. Finally, the Teagle-funded project has identified the need for greater national coordination of best practices and more centralized sources of information about promising approaches to developing and scaling up programs.

The challenges to which PFF responded in the early 1990s are still with us in current calls for enhanced professional development of graduate students and public concerns for the quality of undergraduate higher education. More such programs for graduate students aspiring to faculty positions and better integration of learning assessment into those programs will benefit students, programs, and institutions, and will also carry broader national benefits. These programs have the potential to provide more than a means for the next generation of faculty to develop their own skills and expertise. They may also help create institutional cultures in which

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¹ This increase is discussed in the April 2010 *Communicator* and in CGS, 2011.

Data Sources: Graduate Enrollment and Degrees: US and Canadian Comparisons

For more than 25 years, the Council of Graduate Schools, in partnership with the Graduate Record Examinations (GRE) Board, has collected and published data on graduate enrollment and degrees in US colleges and universities (Council of Graduate Schools, 2010). Similar data are published by the Canadian Association for Graduate Studies for institutions in Canada (Canadian Association for Graduate Studies, 2011). While differing definitions and methodologies prevent exact comparisons between the two sources, the data illuminate some similarities as well as some differences in the graduate student populations of the US and Canada.

One major difference between graduate enrollment in the US and in Canada is the size of the graduate student population. Graduate enrollment in the US is more than ten times larger than graduate enrollment in Canada. Institutions responding to the CGS/GRE Survey of Graduate Enrollment and Degrees reported enrolling a total of nearly 1.75 million students in US graduate programs in 2008. In contrast, graduate enrollment in Canada totaled about 172,000 students in that same year.

Graduate enrollment is increasing slightly faster in Canada than in the US. Since 1999, graduate enrollment has grown by 5.3% annually on average in Canada, compared with a 3.7% average annual increase in the US.

In both the US and Canada, the majority of all graduate students are women. In 2008, women comprised 59% of all US graduate students and 53% of all Canadian graduate students (see Figure 1). In both countries, women accounted for a larger share of master's enrollment than doctoral enrollment. In the US, 61% of all students enrolled in master's programs in 2008 were women, and 51% of doctoral enrollees were women. Similarly, in Canada women comprised 55% of master's enrollees and 47% of doctoral enrollees in 2008. The share of women in graduate enrollment is on the rise in both the US and Canada, increasing from 55% in 1999 to 59% in 2008 in the US and from 50% to 53% in Canada over the same time period.

International students comprise a similar share of graduate enrollment in the US and in Canada. In 2008, 16% of all graduate students in US institutions were international, while in Canada, about 15% were international. In both countries, international students are more likely to be enrolled in science and engineering and business fields than in arts and humanities fields. The international student population in both countries increased as a share of total graduate enrollment between 1999 and 2008, but growth in Canada outpaced growth in the US. The international share of graduate enrollment increased from about 15.5% to 16% in the US between 1999 and 2008, compared with a gain from 12% to 15% in Canada over the same time period.

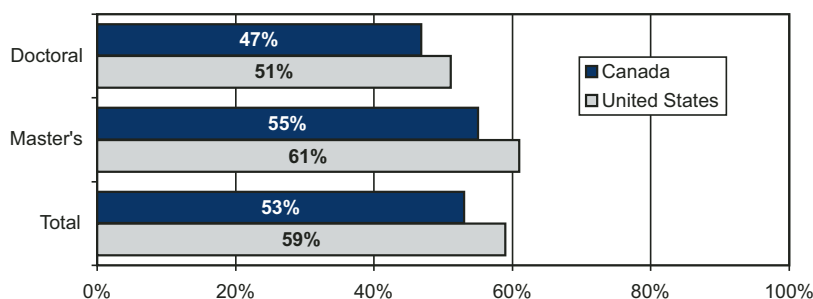
International students at Canadian institutions are most likely to be from countries in Eastern and Southern Asia. At the master's level in Canada, 3.1% of all students come from Eastern Asia and 2.0% from Southern Asia. At the doctoral level, 3.8% come from Southern Asia and 3.4% from Eastern Asia. While the CGS/GRE Survey of Graduate Enrollment and Degrees does not collect data on country of origin for international students attending institutions in the US, data from the CGS International Graduate Admissions Survey show that about half of all international students at US graduate schools are from China, India, and South Korea (Bell, 2010), indicating the importance of students from Asian countries to the graduate school populations of both countries.

Graduate students in the US are more likely to be enrolled part-time than graduate students in Canada. In 2008, 45% of all US graduate students were enrolled part-time, compared with 26% of Canadian graduate students. In both countries, graduate students in education were among the most likely to be enrolled part-time.

In both the US and Canada, the majority of all graduate degrees awarded each year are master's degrees. In Canada, about 36,500 master's degrees were awarded in 2008, compared with 5,400 doctorates. In the US, institutions responding to the CGS/GRE Survey of Graduate Enrollment and Degrees reported awarding over 488,000 master's degrees in 2008, compared with about 56,000 doctorates.

In the US, education and business were the largest broad fields at the master's level in 2008, accounting for 29% and 23%, respectively, of the master's degrees awarded that year. In Canada, the largest broad field was business, management and public administration, accounting for 29% of all master's degrees in 2008. The field of education is much smaller in Canadian institutions, with just 11% of all master's degrees in 2008 awarded in that broad field.

Figure 1. Women as a Percentage of Total Graduate Enrollment in the US and Canada, by Level, 2008



Sources: Canadian Association for Graduate Studies, 2011, and Council of Graduate Schools, 2010

At the doctoral level in the US, engineering and physical sciences were the largest broad fields, each accounting for about 15% of all doctorates awarded that year. In Canada, the broad field of physical and life sciences accounted for the largest share of doctorates awarded in 2008 (26%), followed by architecture, engineering, and related technologies (19%). While there are differences in the taxonomies used in the two data sources, the broad fields of engineering and physical sciences account for a large portion of the doctorates awarded each year in both Canada and the US.

While the size of graduate education in the US dwarfs that of Canada, both countries have similar percentages of international students and similar trends in the participation of women in graduate education. They also share some similarities in the fields of study that comprise the majority of the graduate degrees awarded and the countries of origin of their international graduate students. And Canada and the US have both experienced an increase in graduate enrollment over

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assessment is understood to be a core aspect of teaching and learning, and fundamental to the missions of both undergraduate and graduate education.

Contacts: Daniel Denecke, Julia Kent, William Wiener

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the past decade. The two data sets examined in this article, while not directly comparable, clearly document some shared trends in graduate education and highlight the value placed on graduate education in both Canada and the US.

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

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CGS Announces RFP on Completion and Attrition in STEM Master's Programs

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

New Deans and Titles

Jerald Ainsworth is Dean of the Graduate School at the University of Tennessee at Chattanooga. He replaces Stephanie Bellar.

Robert I. Bolla is Dean, Graduate School and Associate Provost, Research at Bradley University. He replaces Kurt Field.

Rhonda K. Gaede is Interim Dean, Graduate Studies at the University of Alabama in Huntsville. She replaces Debra Moriarity.

Carol Glod is Dean, Graduate School at Salem State College. She replaces Emerson Baker.

Michael Goldstein is Interim Vice Provost, Graduate Education and Dean, Graduate Division at the University of California, Los Angeles. He replaces Claudia Mitchell-Kernan.

Gerald B. Grunwald is Dean, Jefferson College of Graduate Studies at Thomas Jefferson University. He replaces James Kean.

Andrew C. Hansen is Associate Provost for Undergraduate and Graduate Studies at the University of Wyoming. He replaces Rollin Abernathy.

Jodie R. Hanzlik is Interim Vice Provost for Graduate Affairs at Colorado State University. She replaces Peter Dorhout.

Chanta A. Haywood is Associate Vice Chancellor, Graduate Research and Dean, Graduate Studies at North Carolina Central University. She replaces Sandra DeLauder.

Jan W. Hillard is Associate Provost, Research, Graduate Studies/Regional Stewardship at Northern Kentucky University. She replaces Kirsten Fleming.

Andrew Hsu is Dean, Graduate Studies at Wright State University. He replaces Joseph Thomas.

Edward W. Inscho is Acting Dean, School of Graduate Studies at Medical College of Georgia. He replaces Gretchen Caughman.

Constance Johnson is Associate Provost/Vice President, Academic Operations at American Intercontinental University. She replaces Terry Dixon.

Linda Jones is Interim Graduate Dean at Roosevelt University.

Halyna Kornuta is Associate Vice President, Academic Affairs/Accreditation Liaison Officer at California State University, Stanislaus. She replaces Diana Demetrulias.

Harry Laver is Interim Director at Southeastern Louisiana University. He replaces Jerald Ainsworth.

Dwight McBride is Dean, Graduate School and Associate Provost, Graduate Education at Northwestern University. He replaces Andrew Wachtel.

Peggy Miller is Interim Dean of the Graduate School at Texas Tech University.

Vilma S. Mueller is Director of Graduate Studies at Caldwell College. She replaces Dennis DeLong.

Vann R. Newkirk is Dean of Graduate Studies at Alabama A&M University. He replaces Michael Orok.

Eric W. Overstrom is Provost ad interim at Worcester Polytechnic Institute. He replaces John Orr.

Risa I. Palm is Senior Vice President, Academic Affairs and Provost at Georgia State University. She replaces Ronald Henry.

Steve Pawluk is Provost at La Sierra University. He replaces Warren Trenchard.

Randall Pembroke is Vice President for Academic Affairs at Washburn University. He replaces Robin Bowen.

Burton W. Peretti is Interim Dean, Graduate Studies and External Programs at Western Connecticut State University. He replaces Ellen Durnin.

Hilary Ratner is Vice President, Research and Interim Dean, Graduate School at Wayne State University. She replaces Mark Wardell.

New Deans and Titles

Sanjiv Sarin is Interim Associate Vice Chancellor, Research and Graduate Dean at North Carolina Agricultural and Technical State University. He replaces Alan Letton.

Alberta M. Sbragia is Vice Provost for Graduate Studies at the University of Pittsburgh. She replaces Patricia Beeson.

Barry Shur is Dean, Graduate School at the University of Colorado Denver. He replaces Robert Damrauer.

Stephen Sprang is Associate Provost for Graduate Education at the University of Montana. He replaces Perry Brown.

S. Gregory Tolley is Director of Graduate Studies at Florida Gulf Coast University. He replaces Mike Savarese.

Paaige K. Turner is Associate Vice President, Community Engagement at Saint Louis University. She replaces Donald Brennan.

David S. Weiss is Dean, Graduate School of Biomedical Sciences at the University of Texas Health Science Center at San Antonio. He replaces Robert Reddick.

Marino Xanthos is Associate Provost for Graduate Studies at New Jersey Institute of Technology. He replaces Ronald Kane.

David R. Yesner is Acting Dean, Graduate School at the University of Alaska Anchorage. He replaces Robert White.

Victor Zaloom is Dean, Graduate Studies at Lamar University. He replaces Oney Fitzpatrick.

Richard Zauft is Associate Vice President, Academic Affairs and Dean, Graduate Studies at Emerson College. He replaces Donna Schroth.

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