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TAKING STOCK

CONTEMPLATING NORTH AMERICAN GRADUATE STUDENT PROFESSIONAL DEVELOPMENT PROGRAMS AND DEVELOPERS

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A two-stage study was conducted to identify key competencies in graduate student development programs at Canadian and U.S. institutions. Once thirty-nine key competencies were identified, developers of graduate students were asked to rate the importance of each competency in their programming, the extent to which each competency was explicitly taught, and their own confidence in the training received to help teach these competencies. One key finding suggests that numerous potential gaps exist in the training of those who deliver graduate student development programs, which organizations such as the Professional and Organizational Development Network in Higher Education can help to address.

Central to educational development organizations is the development of our future professoriate through services and programs. In North America, there is a recent sense of urgency about the perception that graduate students are lacking an array of nontechnical skills that are critical for new academics, including communication and interpersonal skills, critical

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and creative thinking, integrity and ethical conduct, teaching competence, leadership, research management, knowledge mobilization and knowledge translation, and social and civic responsibility (Bilodeau, 2007). Although the literature on graduate student development (GSD) is prolific (Marincovich, 1998; Nyquist, 2002; Schönwetter & Taylor, 2001), little is known about the core competencies to which U.S. and Canadian GSD programs ascribe. There is also a gap in the knowledge about educational developers' confidence in and preparation for developing these competencies in their graduate students. The former need will guide GSD, whereas the latter will enable identification of key areas for career development of educational developers, especially neophyte developers responsible for GSD.

Literature Review

Researchers with a historical focus have discussed the importance and the types of programs offered to develop graduate students (Boyer, 1990; Chism, 1998). Numerous articles identify themes viewed as significant in training graduate students (Chism, 1998). Postsecondary teaching courses are included as just one of many facets of this training (Ronkowski, 1995). The literature also provides ample information on how to set up and run such programs (Marincovich, Prostko, & Stout, 1998). However, core program elements, including core competencies, are not clearly articulated in this literature.

Based on an extensive literature review and a panel interview using the Delphi method with thirty-three American leaders in GSD, Smith and Simpson (1995) validated twenty-seven competencies as critical for graduate students. However, the leaders' years of expertise in graduate student development, their level of confidence in facilitating each competency, and the extent to which they were trained in these competencies were not addressed. Canadian educational developers have built on this foundational work. One study included a comprehensive review of university teaching courses offered to graduate students and identified a set of common course competencies (Schönwetter, Ellis, Taylor, & Koop, 2008). Although core competencies were proposed, they represented only one component of GSD: competencies addressed in courses on university teaching rather than in more comprehensive programs.

In other research, Schönwetter and Taylor (2003) asked graduate students enrolled in one certification in higher education program to rank the importance of specific program competencies with respect to teaching development. Schönwetter and Ellis (2007) created a list of potential competencies that reflect core elements in many GSD programs. A related

longitudinal study focused on GSD programs in two Canadian universities demonstrated that similar competencies were critical in both programs but that students' perceptions of the key competencies before the program had changed by the end of the program (Taylor, Schönwetter, Ellis, & Roberts, 2008). These studies' findings were specific to graduate student participants, not to those who teach them. The experiences and perceptions of GSD developers are critical as well and are the focus of the study reported in this chapter.

The findings of this study add an international perspective to existing research (Chism, 1998; Lewis, 1992; Marincovich, 1998; Marincovich et al., 1998; Nyquist, 2002; Nyquist et al., 1999; Smith, 2001). We hope our findings will guide the training of educational developers who are responsible for GSD and may be new to the profession and assist developers in creating and refining their own GSD programs. In addition, we hope our findings will provide direction to groups such as the Professional and Organizational Development Network in Higher Education (POD)'s Graduate Student Professional Development (GSPD) subcommittee in identifying and meeting membership needs.

Research Questions

This project tapped into the experiences of educational developers responsible for GSD programs in the United States and Canada and sought to discover (1) a list of common and unique GSD program competencies, (2) which of these competencies are explicitly taught as part of GSD programs, (3) the importance of these competencies, and (4) the confidence levels and training that GSD developers have and need in order to help their graduate student participants develop these competencies. To capture these data, two studies were conducted. The second study is the primary focus of this chapter.

Study 1: Identifying Critical GSD Program Competencies

Seventy GSD developers belonging to POD's GSPD subcommittee were invited in January 2007 to provide a list of the top competencies currently included in their institution's GSD programs on teaching development. Seventeen GSD developers (representing 24.4 percent of developers belonging to the GSPD subcommittee) provided 152 responses.

We conducted a theme analysis, guided by Smith's (2001) ten pivotal events in graduate teacher preparation for a faculty career. Numerous competencies were identified within the ten resulting categories.

Table 1.1 Categories of GSD Program Competencies Identified by GSD Developers

Category Label	Percentage Responses Within Category
Lesson and course design	17.8%
Teaching skills	17.1
Evaluation and feedback	13.2
Self-reflection	11.8
Interpersonal skills	10.5
Scholarship of teaching and learning	7.9
Presentation and communication skills	7.2
Management of time and people	7.2
Accessing and providing resources	4.6
Being mentored and mutual learning	2.6

Table 1.1 provides a synopsis of the competency categories and the percentage of responses that fell within each category.

The overall results replicate studies that captured content of GSD courses on teaching in higher education (Schönwetter et al., 2008) and what graduate students found as being most important in their teaching training (Taylor et al., 2008). Although study 1's findings reveal what GSD developers perceive are important program competencies, they do not indicate which are most important, which are taught, or how competent the GSD developers feel in teaching these competencies. Study 2 addressed these limitations.

Study 2: Exploring GSD Program Competencies

Exhibit 1.1 lists the thirty-nine competencies identified by GSD developers in study 1. A Web-based survey was created to address the research questions. The first section focused on participant demographics such as age, gender, and number of years in graduate student development. The second set of questions focused on evaluating each of the thirty-nine competencies on a five-point Likert scale (1 = not at all to 5 = very much so) in terms of four criteria: how important this competency is for preparing graduate students to teach as future faculty, the extent to which it is explicitly taught in their graduate student development programs, how confident they feel in preparing graduate students in this area, and the

extent to which their training prepared them to teach graduate students these competencies. The survey was distributed to two groups of GSD developers: members of the POD GSPD subcommittee and members of the Canadian Teaching Assistant Developers listserv. Both groups have Canadian and American members, but respondents were asked to identify their country as part of the demographic information. The survey was housed on the QuestionPro.com website and was made available for three months. Reminders were sent in weeks 5 and 9.

Exhibit 1.1 Competencies Assessed in a Survey of GSD Developers

- Exhibit respect and understanding for all students.
- Construct valid and reliable assessments of their students' learning.
- Able to use effective discussion techniques.
- Able to use effective questioning techniques.
- Able to use effective assessment methods.
- Communicate and manage appropriate expectations for achievement in the course.
- Design courses that challenge students to pursue higher-level learning, such as critical thinking and problem solving.
- Develop a reflective approach to teaching through collecting feedback and continually modifying instructional approaches.
- Match varying teaching methods with specific learning objectives.
- Match varying assessment methods with specific learning objectives.
- Able to write specific and assessable learning objectives.
- Engage in professional development related to teaching.
- Document their teaching effectiveness.
- Communicate effectively in oral format in English.
- Provide a welcoming and safe environment for their students.
- Able to articulate the values of their teaching approach (i.e., teaching philosophy).
- Adhere to institutional policies (i.e., discipline, academic honesty, and legal information).
- Communicate effectively in written format in English.
- Able to use effective lecturing techniques.
- Seek out mentoring on teaching.
- Able to teach small and large classes.

- Perceive teaching as a scholarly endeavor.
- Use student-centered teaching methods.
- Recognize that teaching requires lifelong reflective learning.
- Select course material suited to the background, ability level, and interest of their students.
- Apply their knowledge of learning principles and learning theories.
- Present material that is sequenced and paced appropriately for their students.
- Enhance motivation of their students through conveying personal enthusiasm for the subject.
- Accommodate different learning styles of their students.
- Able to adapt teaching material to students' needs.
- Demonstrate mastery of their subject.
- Encourage cooperation and collaboration among their students.
- Build confidence in students by helping them to successfully meet learning objectives.
- Use research in teaching as it applies to instruction in one's field.
- Communicate important values inherent to the discipline or profession.
- Be self-aware of their teaching biases.
- Know how to uncover departmental norms regarding teaching.
- Use technology to enhance learning.
- Advise students of career opportunities in the discipline or profession.
- Demonstrate relationships between the course and the broader liberal education curriculum.

Study 2 Results and Discussion

From December 2008 to February 2009, 149 GSD developers viewed the online survey, 106 started the survey, and 34 completed it (32.1 percent completion rate). The average time required to complete the survey, thirty-one minutes, may explain the relatively low response rate.

GSD DEVELOPER DEMOGRAPHICS

The ratio of the respondents reflects the number of GSD programs in the United States and Canada: eighteen (52.9 percent) Americans, thirteen (38.2 percent) Canadians, and three unspecified (8.8 percent) (Schönwetter et al., 2008). Years of experience in GSD ranged from one to twenty-five ($M = 8.97$; $SD = 5.98$), and the age of the respondents ranged

from thirty-two to sixty-four ($M = 44.03$; $SD = 9.69$). The lowest age seemed somewhat high, given the number of younger GSD developers in both the POD and Society for Teaching and Learning in Higher Education (STLHE) associations. Twenty-five (73.5 percent) females and nine (26.5 percent) males responded, indicative of many GSD programs being directed by females.

GSD DEVELOPER TRAINING AND PROFESSIONAL DEVELOPMENT

The highest degrees earned by respondents were twenty-five doctorates (73.5 percent), eight master's (23.5 percent), and one other (2.9 percent). In response to the question, "As a faculty developer, is it (or would it be) helpful in your current position to have a doctorate degree?" the majority ($N = 32$; 94.1 percent) indicated yes. This result suggests that further graduate education may be desirable and provides support for doctoral programs in faculty development, as well as support for the ongoing movement toward professionalization of faculty development (Gosling, McDonald, & Stockley, 2007; McDonald & Germain-Rutherford, 2009). The most common forms of professional development for GSD developers are POD and STLHE conferences, workshops, and research projects. GSD developers are involved in important professional development activities that not only keep them current in the areas of graduate student development, but are likely to promote networking among them. The number of conference presentations on GSD ranged from none ($N = 4$) to thirty ($N = 30$; $M = 9.27$; $SD = 9.07$). The number of publications on GSD ranged from none ($N = 12$) to fifteen ($N = 22$; $M = 4.36$; $SD = 4.249$), and the number of research grants received for GSD projects ranged from none ($N = 20$) to nine ($N = 14$; $M = 2.64$; $SD = 2.307$). As a group, GSD developers are well trained, have a fairly established record of conference presentations and publications, and have received research grants, reinforcing the legitimacy of the GSD field.

INSTITUTIONS, CENTERS, AND PROGRAMS REPRESENTED

Institutions represented were twenty-three doctoral (67.6 percent), nine comprehensive (26.5 percent), one undergraduate (2.9 percent), and two other (3.9 percent). These results seem reasonable given that most institutions with GSD programs have graduate programs. The types of centers represented were twenty-nine teaching centers (85.3 percent), two graduate student centers (5.9 percent), and three other (8.8 percent), a distribution that is reflected in other studies (Schönwetter et al., 2008). The GSD programs offered at these institutions include workshop series (91.2 percent of all programs), graduate student teaching certificate or certification programs

(85.3 percent), teaching in higher education courses (70.6 percent), peer consultations (70.6 percent), and mentor programs (47.1 percent). These results mirror literature that highlights the importance of such programming for graduate student development (Marincovich et al., 1998; Nyquist, 2002; Richlin, 1995; Schönwetter & Taylor, 2001, 2003; Smith, 2001; Svinicki, 1989). The number of graduate students in the institutions ranged from 300 to 15,000 ($N = 31$; $M = 5,316$; $SD = 4,220$), and the number of graduate students enrolled in GSD programs ranged from 23 to 3,091 ($N = 31$; $M = 515$; $SD = 647$).

PERCEPTIONS ABOUT THE COMPETENCIES

The data were organized according to mean scores and then compared across the four question areas of importance, explicitly taught, confidence to train, and developer preparation. Synopses of the highest- and lowest-scored items for each question area are in Tables 1.2 and 1.3.

All thirty-nine GSD competencies were perceived as important by GSD developers, scoring well above the midpoint of the scale (the lowest was 3.60). Table 1.2 shows a pattern in that the six most important competencies (those scoring above 4.60) match basic requirements for effective teaching, particularly active learning strategies. These competencies also fit with the themes often represented in POD and STLHE conference sessions. Interestingly, the items most often explicitly taught (in column 2 of Table 1.2) do not completely match those listed as most important. The areas taught in GSD programming tend to fall more into the area of reflective practice, replicating the reflective emphasis found in a synopsis of graduate courses on teaching in higher education (Schönwetter et al., 2008).

As anticipated, the top items about which graduate student developers feel most confident teaching overlap substantially with those explicitly taught, reflecting that confidence tends to build with practice. However, with the exception of “being able to use effective discussion techniques,” the areas of most confidence do not overlap with those rated as most important. The mismatch between areas of confidence and importance suggests a gap that professional associations such as POD and STLHE could fill through professional development activities. The high ratings for discussion techniques in all four columns also raise questions (not addressed in the survey) about the disciplinary backgrounds of those who responded to the survey, since discussions occur much more frequently in humanities and social science courses.

Also not surprising, the areas of most confidence overlap considerably with the competencies that developers feel best prepared to teach, yet these competencies focus primarily on attitudes, such as reflecting on

Table 1.2 Highest-Rated Competencies for Each Question Category

Importance of Competency ($M \geq 4.62$)	Explicitly Taught ($M \geq 4.30$)	Confidence to Train ($M \geq 4.62$)	Developer Preparation ($M \geq 4.00$)
Exhibit respect and understanding for all students	Able to use effective discussion techniques	Able to articulate the values of their teaching approach (teaching philosophy)	Able to use effective discussion techniques
Construct valid and reliable assessments of their students' learning	Engage in professional development related to teaching	Document their teaching effectiveness	Document their teaching effectiveness
Able to use effective discussion techniques	Develop a reflective approach to teaching through collecting feedback and continually modifying instructional approaches	Develop a reflective approach to teaching through collecting feedback and continually modifying instructional approaches	Able to articulate the values of their teaching approach (teaching philosophy)
Able to use effective questioning techniques	Document their teaching effectiveness	Engage in professional development related to teaching	Engage in professional development related to teaching
Able to use effective assessment methods		Able to use effective discussion techniques	
Communicate and manage appropriate expectations for achievement in the course		Provide a welcoming and safe environment for their students	

teaching and engaging in further development, rather than on concrete skills needed to succeed in teaching, such as setting assessments or conveying course expectations. Again, with the exception of “being able to use effective discussion techniques,” GSD developers were not most confident with those competencies deemed most important, so they could

Table 1.3 Lowest-Rated Competencies for Each Question Category

Importance of Competency (<i>M</i> ≤ 3.93)	Explicitly Taught (<i>M</i> ≤ 2.83)	Confidence to Train (<i>M</i> ≤ 2.96)	Developer Preparation (<i>M</i> ≤ 2.79)
Be self-aware of teaching biases	Communicate effectively in written format in English	Know how to uncover departmental norms regarding teaching	Select course material suited to the background, ability level, and interest of their students
Know how to uncover departmental norms regarding teaching	Communicate important values inherent to the discipline or profession	Advise students of career opportunities in the discipline or profession	Demonstrate relationships between the course and the broader liberal education curriculum
Use technology to enhance learning	Select course material suited to the background, ability level, and interest of their students	Demonstrate mastery of their subject	Use technology to enhance learning
Advise students of career opportunities in the discipline or profession	Demonstrate relationships between the course and the broader liberal education curriculum		Demonstrate mastery of their subject
Demonstrate relationships between the course and the broader liberal education curriculum	Know how to uncover departmental norms regarding teaching		Know how to uncover departmental norms regarding teaching
	Demonstrate mastery of their subject		Communicate important values inherent to the discipline or profession
	Advise students of career opportunities in the discipline or profession		Advise students of career opportunities in the discipline or profession

benefit from receiving training in these areas (see Table 1.2). Such training is unlikely to be an explicit part of most discipline-specific graduate programs, thus reinforcing the value of graduate programs in faculty development.

The competencies rated least important by GSD developers (Table 1.3) tended to link directly to discipline-specific information (departmental norms, career opportunities, and course connection to liberal education curriculum) or strategies that fall outside traditional classroom teaching (using technology to enhance learning). Discipline-specific competencies appear in almost every column as those with the lowest scores, many falling below the midpoint of the scale (3.0). A primary reason could be that developers typically have received their own postsecondary education in one or two disciplines. Since developers are unable to be experts in every discipline, perhaps they need professional development to help connect their work to the disciplines in the form of conference sessions that describe models for involving graduate students or faculty members as GSD developers. Training in the field of organizational development, an increasing area of focus for POD, may help attain the competency of uncovering departmental norms.

Surprisingly, being self-aware of teaching biases was rated among the lowest in importance, and yet some of the competencies that scored the highest in all areas except importance (see Table 1.2) were documenting teaching effectiveness and articulating teaching values. How can one provide a critically reflective teaching philosophy without being aware of biases? Perhaps graduate student developers could benefit from learning about tools such as teaching perspective inventories (Angelo & Cross, 1993; Pratt, 2001) so both they and their students can learn more about the benefits and limitations of different approaches to teaching.

Another troubling result is the low importance ascribed to teaching with technology. This result raises questions about whether developers feel that technology is so ubiquitous that graduate students no longer require training in how to use it in pedagogically effective ways or if developers themselves do not have the training to provide this type of assistance. The results from the developers' training column in Table 1.3 suggest the latter is the more likely explanation. Perhaps graduate student developers could benefit from training in this area since it is unlikely that technologies will disappear from higher education. Again, professional associations could assist with this knowledge gap, particularly with face-to-face or virtual training.

Finally, it is surprising to see that the students' ability to communicate effectively in written English was one of the least often taught competencies.

Presumably students in GSD programs are assessed in some way and written assignments may be a common format, particularly with the prevalence of teaching portfolios in GSD teaching courses and certificates. If students need to communicate what they have learned in writing, is it not important to also assist them with this skill as part of the program? Reflective writing, which is common for documents such as teaching portfolios, is quite different from the writing used in technical reports or research essays. However, faculty members in many disciplines struggle to teach written communication skills to their students; perhaps graduate student developers face a similar challenge. Organizations like POD and STLHE could provide conference sessions or online resources on effective strategies for teaching and assessing written work.

A number of one-way ANOVAs were conducted to determine if any differences existed based on gender or experience cohorts. With gender, statistically significant differences were found in relation to two competencies on the extent to which these are taught in GSD programs: “presenting material that is sequenced and paced appropriately for their students” and “ability to adapt teaching material to students’ needs.” In both cases, female graduate student developers reported higher frequencies of teaching these competencies than males did. These findings call into question whether differences are related solely to gender or whether men and women have different training or disciplinary backgrounds. Unfortunately, the study does not provide information needed to clarify this difference.

One-way ANOVAs were also performed using experience cohorts (one to five, six to ten, and ten or more years of experience) on each of the competencies. In terms of GSD developers’ confidence, the “be self-aware of their teaching biases” competency demonstrated differences ($p < .01$). Least squares difference post hoc t -tests ($p < .05$) showed that the more experienced cohort (ten or more years of experience) reported statistically significant higher perceptions of confidence than either the younger cohort (one to five years) or the middle experience cohort (six to ten years). This result may suggest that it takes time to learn effective tools or questions to feel confident when helping graduate students uncover their teaching biases.

In terms of explicitly teaching competencies in their programs, the “seeking out mentoring on teaching” competency demonstrated statistically significant differences based on experience ($p < .01$). Least square differences post hoc t -tests ($p < .01$) showed that the more experienced cohort (ten or more years of experience) taught this competency more

than the younger cohort (one to five years) did. Again, increased experience may make it more likely that these developers have either had their own mentor or served as a mentor, an experience that could help them recognize the importance of mentoring and know how to teach their graduate students to engage effective mentors as part of their professional development.

Limitations and Implications for Future Research

Although the findings presented here extend the research of previous studies by providing a larger sample of participants from both the United States and Canada, the study has its limitations. Only one-third of current graduate student developers who were solicited responded to the online survey. Future research needs to find ways to engage more of this population. Possibilities are reducing the number of survey items, providing incentives to encourage participation, or running the survey as part of a conference registration.

The study sought primarily quantitative data and in many cases could benefit from additional open-ended questions or follow-up interviews to provide in-depth explanations of the findings. Also important would be a comparison of graduate student developers from other countries, including those from the European Union nations, Australia, and New Zealand, to provide a more global perspective. Finally, a comparison of GSD programs and developers to new faculty programs may be of interest, given that there may be substantial overlap between the two types of programs.

Conclusion

Graduate student development is a critical component of many teaching centers' programming. The international and multi-institutional study discussed in this chapter provides guidance and questions for the development of our future professoriate and those directly responsible for their development. The findings suggest the existence of numerous gaps that professional associations and higher education institutions can fill through conference sessions, other professional development activities or resources, and graduate programs targeted to GSD developers and the programs they offer. Graduate students represent the future professoriate, and their teaching preparation is vitally important to the future of higher education. But to help this key cohort, we cannot overlook

those who support their development. This study suggests a need to promote and provide solid preparation for graduate student developers. Let us hope that the members of our professional associations rise to meet this need.

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