Surviving and Thriving:
Recommendations for Graduate Student-teachers from Colleagues Further Along the Path

Carolyn Hoessler, PhD., University of Saskatchewan
Laura Kinderman, PhD., Queen's University
Alicia Hussain, PhD., Queen's University
Amelia Horsburgh, PhD., University of Saskatchewan

Authors' Contact Information

Carolyn Hoessler, PhD., Program and Curriculum Development Specialist
Gwenna Moss Centre for Teaching Effectiveness
University of Saskatchewan
50 Murray Building, University of Saskatchewan, Saskatoon, Saskatchewan S7N 5A4
Email: carolyn.hoessler@usask.ca
Phone: 306-966-5371

Laura Kinderman, PhD., Associate Director,
Office of Health Sciences Education,
Associate Director, Bachelor of Health Sciences
Queen's University
78 Barrie St, Queen's University, Kingston, ON, K7L 3N6
Email: l.kinderman@queensu.ca
Phone: 613-533-6000 x78083.

Alicia Hussain, Ph.D., Educational Researcher,
Faculty of Education,
Queen's University
712-88 Redpath Avenue, Toronto, Ontario, M4S 2J8
Email: alicia.hussain@bell.net

Amelia Horsburgh, Ph.D.,
Saskatoon, SK Canada
Email: amelia.horsburgh@usask.ca

Abstract:

Graduate students involved in teaching face multiple challenges, including providing frontline support for students, balancing relationships and time commitments, creating welcoming and effective classroom environments, engaging students, and creating or seeking supports as needed. They are supported by peers, who share insights and resources, and by faculty and staff, who provide teaching development opportunities. Going beyond informal conversations in teaching assistant offices, this article draws on the lived experience of interviewed graduate student-teachers, as well as faculty and staff who support them, to identify five key advice themes. Each theme was developed inductively from quotations, which have been interwoven with scholarship to provide advice that synthesizes the collective, scholarly, and personal insights of current and future graduate student-teachers, as well as the individuals and institutions seeking to support quality graduate student teaching.

Key Words:

Graduate students, teaching assistants, teaching development, graduate student development, teaching assistant development.

Introduction

Inviting graduate students to teach presents both challenges and opportunities for both the graduate students and their higher education institutions. Graduate students contribute significantly to the quality of undergraduate education at their institutions (Piccinin, Farquharson, & Mihu, 1993). As teaching assistants, they lead tutorials, conduct lab demonstrations, mark assignments, hold office hours, respond to emails, interact with students, and more; and as instructors are responsible for a course offering (Author, 2015). Sure, it is a job, yet teaching is for some intrinsically motivating (Barrington, 2001; Smith, 2001).

The concerns of graduate student-teachers are well-documented and include, according to Cho, Kim, Svinicki, and Decker's (2011) five categories, with teaching concerns focused on: class control (self-focused), external evaluation (self-focused), task, impact on student learning, and role/time/communication. Graduate student-teachers' prior experience and confidence both vary and have implications for their concerns. Having lower confidence was related in Cho and colleagues' study to greater self, task, and communication concerns, while higher confidence predicted concern for the impact their teaching was having. Teaching experience predicted lower self-focused concerns of class control and external evaluation, while having professional development, feeling efficacious, and valuing teaching predicted higher impact on student learning concerns.

To address such concerns and support graduate students in their teaching development, institutions often provide formal professional development. However, studies have captured only moderate levels of awareness and participation in such workshops, certificate programs, and training (Barrington, 2001; Golde & Dore, 2004; Walstad & Becker, 2010). Results of training show some improvements in individuals' conceptions about teaching (Saroyan, Dagenais, & Zhou, 2009) and developmental stages in understanding their teaching role and process (Wulff, Austin, Nyquist, &

Sprague, 2004). However, typical teaching assistant training had limited perceived (Russell, 2009) and observed impact on practice (Buehler & Marcum, 2007).

In addition to or in lieu of such training, graduate student also act as agents in their own academic development and that of their peers (Lovitts, 2004). On the premise that both formal and peer-based professional development opportunities can support graduate students' teaching development, the advice in this article is synthesized from themes arising from interviewed graduate student-teachers and faculty/staff, and the existing scholarly literature. Our assumption is that each graduate student from the newest to the most experienced can be scholarly teachers drawing on well-informed literature (Richlin, 2001) while developing their teaching expertise (Kreber, 2002).

Methodology

As part of a larger mixed-methods study on what supports graduate student-teachers at one institution (with ethics approval and participant consent), thirteen graduate students were interviewed (6 doctoral and 7 master's students; 8 males, 5 females) whose academic disciplines were evenly distributed across Biglan-Becher categories (Biglan, 1973; Becher & Trowler, 2001) of hard-pure (n=4), soft-pure (n=3), hard-applied (n=3), and soft-applied (n=3) disciplines. Interview questions asked what supports for graduate students were available, what further supports were desired, and lastly, what advice they had for other graduate student teaching assistants and instructors. Eight supportive faculty and staff were similarly interviewed, including one from each discipline category (n=4) and four from institution-wide units. Graduate students are referred to by GS1 to GS13, and faculty/staff by pseudonyms (e.g., Mary).

During initial coding of the interviews, advice provided by interviewees was tagged with "advice" and subsequently inductively analyzed for themes. The five derived themes highlight challenges that are also opportunities for growth, specifically: providing frontline support for students; balancing relationships and time commitments (similar to the highest concern uncovered by Cho et al., 2011); creating welcoming and effective classroom environments; engaging students; and creating or seeking supports as needed.

Each theme, explored separately in this article, interweaves interview quotes with existing scholarship to provide a cohesive set of advice for each challenge. The themes were distributed among the authors, who at the time of writing were three current and one recently defended graduate student from a range of disciplinary backgrounds. Each theme was address by a single author with feedback from the others, retaining the original disciplinary style of the writing to reflect (and invite) the diversity of graduate student-teachers.

Theme 1: Providing Frontline Support

As TAs, graduate student-teachers act as front-line support for students. Graduate students teach as lecturers, teaching assistants (TAs), and lab instructors in nearly 40% of undergraduate courses (according to American researchers Marincovich et al., 1998; no Canadian numbers available), with particularly large proportions in science disciplines such as chemistry (83.8%; Golde & Dore, 2001) and in large introductory

undergraduate courses (see summary by Park, 2004). Students in these classes are typically youth and young adults, with 65% of Canadian university students in 2010 between the ages of 17 and 24 and a median graduation age of 24.8 years old (Dale, 2010). At this age, students are still exploring and forming who they are, according to identity development theorists (including the classic work of Erikson, 1965, and Waterman, 1982), with increasing reflection and commitment to an identity as they mature (Klimstra, Hale, Raaijmakers, Branje & Meeus, 2010). This period of changes in identity, relationships, responsibilities, and environments (including new cities and housing) also coincides with the highest prevalence and onset levels for mental health disorders (Kessler et al., 2005; National Institute of Mental Health, 2005).

In addition to increasing numbers of students (nearing two million in Canada: Statistics Canada, 2013), undergraduate programs are seeing increasing numbers of students with disabilities, including a tripling to 1.3 million American students in the last twenty years (Wolanin & Steele, 2004) and a 66 percent increase in Canadian disability office registrations between 2004 and 2011 (McCloy & DeClou, 2013). Students with disabilities have diverse needs and strategies (Sachs & Schreuer, 2011): while direct accessibility support service is low, with notable variability across Canada (Fichten et al., 2003), teaching strategies, as well as institutional practices, can reduce barriers (see Marquis et al., 2012). Universal instructional design principles (Pliner & Johnson, 2004) offer strategies beneficial to all students and particularly for students with disabilities. Two online resources for educators include https://www.ahead.org/ and http://opened.uoguelph.ca/, respectively.

Mary, who has mentored many TAs at the front-lines of support for students, describes the role as "micro-managing the ups and downs…it's really front-line work…if a student is going to cry you're going to see the tears. If the student is going to be sick, they're going to be sick in your class" (Mary). For example, one interviewed graduate student-teacher noticed that a student was absent from tutorial, reached out, identified a real concern, and suggested supports:

> I emailed her…'Do you want to meet to talk about this assignment?' …we ended up meeting and…I [said] 'You don't have to tell me…what is going on…but if…something…prevented you from handing in the assignment you can either go talk to the professor and if you're not…comfortable…there's counseling services…she was getting counseling already…I email[ed] the professor and saying this is the situation with the student, I think she's going to come talk to you but just so you're aware (GS7)

Graduate student-teachers reach out often because they understand students' experiences. GS7, for example, "remember[ed] when I was a first-year student and also just looking at this class of first-year students, they just seemed…so scared about everything" and was "sensitive to the fact that their marks are so important to them. Especially in…a first-year." When a test question was inaccurate, she raised concerns because "not only are they getting the answer wrong because [the instructor] taught them the wrong thing but they're going to go out into the world and carry this information with them" (GS7).

Such engagement, however, has its price. Graduate student-teachers can feel stressed and emotionally pulled by their students' struggles.

…grad students get really worked up when their students aren't doing well as if it's their responsibility…so I…say to them: 'You just have to accept the fact that that's what happens and it's only first year and some of them are going to drop-out and some of them are going to fail and, it's not your fault….'…you realize that 17-year-olds are going to be emotional about their grades…especially university students 'cause they've gotten good grades in high school. (Mary).

Supports exist on most campuses for accessibility, counseling, health, academic skills, writing, peer advising, navigating prerequisites, and more. Seek out opportunities during orientation to learn about what exists on campus, and identify people to contact when questions arise. If you are an alumnus, refresh your knowledge and look for supports that you may not have needed. If you are new, ask peers, administrative assistants, or the undergraduate chair in your program what is available. Beyond your campus, there is scholarly literature (e.g., Marquis et al., 2012) and other institutions' resources (e.g., Instructor's Handbook: Accommodating Students with Disabilities by the Adaptive Technology Centre at Queen's University).

Theme 2: Balancing Relationships and Time Commitments

During their studies, graduate students balance research, teaching, and service activities with personal responsibilities; set boundaries on the scope of their work; and prioritize time commitments, often without much practical guidance. They also navigate relationships with colleagues, students, or supervisors, inhabit dual roles as students and developing academic experts or professionals, and continuously define and refine their expectations in light of emerging opportunities and constraints.

Tensions often arise when graduate student-teachers feel torn by the demands of conflicting responsibilities, which may result from a lack of communication about roles. When a graduate student-teacher is placed in the position of "the middleman between students and the professor [with the result of] get[ing] sort of pulled" (GS7), that intermediary status entails a tacit assumption of being able to fulfill a set of overly demanding tasks. Clarifying expectations with the supervising professor may help to mitigate feelings of isolation. Another common situation arises when graduate students feel torn between teaching and research roles, with the inability to meet two conflicting sets of expectations.

Enhancing the level of transparency between "dual roles as a student and a teacher" allows for anticipating the students' needs for support and allow for more efficient scheduling (Cho et al., 2011, p. 276). Inhabiting dual roles can be an opportunity to build confidence, enhance time management skills, and optimize work habits. To avoid the "time bandits" that lie in wait and unexpectedly draw graduate students away from the completion of their responsibilities, Mary suggested focusing on "what is in your job description and what is not in your job description, [to] protect your own work and time so that you don't have little time bandits."

Graduate student-teachers frequently encounter frontline instructional challenges while being instructional team members, student advocates, and representatives of the

university involved in making decisions affecting students. The boundaries that graduate students need to invoke and maintain between themselves and students, between themselves and professors, and as representatives of the institution, are sometimes not well defined and must be negotiated on an ongoing basis as issues arise (Spohrer, 2008; Bentham, 2011).

Communication is key. For early career researchers, junior instructors, and graduate student-teachers, a clear understanding of mutual expectations is essential in order to promote skill development, foster collaboration, and motivate scholarly progress (Roy, 2012). As GS11 explained, "I…wan[t] to cover expectations—what they expect from me and what I expect from them. The role of communication and how we can communicate with others…to kind of set the stage for the future tutorials." Similarly, GS13 advised: "Just try to clarify your position to a student." Learning is a shared enterprise, in which both teachers and students benefit from communicating their perspectives. Further, exchanges of ideas between graduate students and with supervisors or other teaching and professional development mentors help to create a supportive teaching and learning community (Girard, 2012).

The ebb and flow of unstructured time in a graduate student's life causes high levels of stress that can be at times restrictive and at others, "overwhelming"; however, finding a peer to open up to should not be underestimated for the exceptional kind of support that they can provide. As GS5 recommended, "Look to other…people who have done it and talk to us…find someone and don't be afraid to talk to them. And it's not that we don't think that you can do your job…sometimes it's really overwhelming."

While the relational dynamics of the university can be isolating, there are several sources of connection and collaboration within the academic environment (Pentecost et al., 2012). Speaking of the graduate supervision experience, GS13 described "rewarding" opportunities in doctoral research through which one may work collaboratively and "[help] the same great cause": "I think it's some kind of inter-personal relationship you get and it's…kind of satisfying." Ultimately, the relationship between supervisor and doctoral student is one of mutual recognition and balance: "I think from the prospective of a doctoral student, I think the most important support they would get is from a supervisor who would say: "It's ok that you like this. It's ok that you want to get into it…the supervisor has to be balanced and give the student some appropriate feedback" on teaching (John).

Identifying and tracking expectations including responsibilities and workload are an important basis for conversations with supervisors. To prevent miscommunications concerning graduate student roles and institutional dynamics, Elizabeth suggested:

…establish[ing] a more collaborative kind of relationship with professors that they're TA-ing for in terms of those things like goals, and how to tie in a lecture with course themes, to ensure that the professor will actually attend, to request that kind of mentoring and feedback.

Graduate students may also seek out help from former instructors or advisors (Marincovich et al., 1998; GS7), though translation of advice may be needed as faculty at other institutions who are knowledgeable about teaching may be "not familiar with the practices of this university" (GS7).

Balance in graduate students' lives may be derived from such formal and informal sources of support, which stand as pillars against the storm of activity that pulls them in all directions. Along the path to developing independent research and teaching skills, "Not just agree" are words that should stand to govern intellectual interactions in the university, especially where there is a mutual exchange of ideas, based upon the individual needs of each graduate student and professor (Nyquist et al., 1996).

Theme 3: Creating a Welcoming and Effective Classroom Environment

Timing is important, as many graduate student-teachers interviewed acknowledged how important the first day of class was in setting the stage for a successful course. As one graduate student-teacher explained:

> The first tutorial is the most important one 'cause it sets the stage. So…I really kind of rehearsed for it. Like I really had a clear idea—a clear outline—of how the tutorial should be structured and I wanted to cover a few things…I also wanted to cover expectations—what they expect from me and what I expect from them (GS11)

Having a shared understanding of acceptable and unacceptable ways of communicating with each other in the classroom can largely help with building a healthy classroom community (Young & Bruce, 2011). Educators are largely responsible for laying the groundwork in the first few days (if not the very first day) in a classroom that communicates the ills of status quos and the expectations that a significant amount of class time will be spent addressing those ills (Tisdell, 1993).

"The classroom is more than simply a place. It is an environment that teachers and students create" (Robb & John, 2005, p. 41). The classroom environment can be considered a community setting where social factors either advance or inhibit student learning (Hirschy & Wilson, 2002; Young & Bruce, 2011). In acknowledging and treating classrooms as community settings, educators invite students to take ownership of the social interactions that occur in classrooms and encourage students to build teacher-student and peer relationships based on shared characteristics, beliefs, norms, and practices. Building community "works best when it's based on a fluid interaction between the instructor and other people in the environment and that human rights fits nicely into that whole idea of dialogue and interaction…think of their classroom as community" (Linda). This faculty/staff member also mentioned the human rights component of interactions in the classroom, in line with Hirschy and Wilson (2002)'s assertion that classrooms are ideal venues for educators to address social inequities. Therefore, interactions in classrooms are not only about being polite to others, but it is also about acknowledging and actively confronting the status quo.

Tisdell (1993) noted that it is vital for educators to proactively address expectations in the classroom and equally important for educators to acknowledge their roles as facilitators who will address the ills of status quos to teach for social change. In doing so, it is important for educators to examine power relations and privilege in the classroom (Tisdell, 1993). This entails a great deal of on-going reflection for educators and their students in regards to their gender roles, racial/ethnic identities, sexualities, socio-economic statuses, and worldviews. This responsibility of laying the groundwork

to address the ills of the status quo can be quite overwhelming for graduate student-teachers. Many graduate student-teachers "arrive in the classroom unprepared to fulfill their responsibilities—they have little or no formal background in education or instructional methods, they often receive no systematic training, and little teaching experience" (Cho et al., 2011, p. 267).

In acknowledging and addressing power relations and privilege in the classroom, especially in the context of adult education, a great amount of mutual respect and patience is required. Although navigating conversations and interactions about power and privilege can prove challenging,well-documented especially in the first few days of classes, it is important for graduate student-teachers to make students aware of their approach (Cho et al., 2011; Tisdell, 1993). One graduate student-teacher stated the challenge and importance of an educator communicating their position as a teaching assistant (and not the course instructor) on the first day, to "…try to clarify your position to a student. It's a little hard to do it the first day: Ok guys, I don't have so much power. It's not very easy to do it" (GS13). Another graduate student-teacher underscored the importance of educators being sincere about who they are and what they stand for to connect with the course content and engage students in learning:

> They [educators] have to be genuine because if they go out there and they try to do something that is artificial—whatever that may be—if they can't sell their teaching, the students will pick up on it and they will recognize: Well, look at this person in the front of the room. They're not interested in the subject. You can tell they are disengaged. Why should I care? Why should I even come to class? (GS9)

It is through these conversations and an educator's genuine caring attitude about the learning and well-being of students that a trusting classroom community is formed (Hirschy & Wilson, 2002).

A welcoming and trusting classroom environment allows students to feel safe and comfortable (Jenkins & Demaray, 2012). Feelings of safety and trust significantly contribute to optimal learning and development (Craig & Pepler, 2007; Freiberg & Lapointe, 2006). Educators can "influence classroom climate by emphasizing the type of learning environment, such as valuing achievement, love of learning, competition, collaboration, or caring" (Hirschy & Wilson, 2002, p. 88).

Theme 4: Engaging Students in Learning

Many graduate students—as teaching assistants, lab instructors, tutorial leaders—wonder if their students are engaging critically with the material. As teaching assistants, graduate student-teachers are in the unique frontline position of being the go-between, navigating and mediating between the instructor of record and the undergraduate students. In the labs and tutorials, these graduate student-teachers can build on the knowledge presented in the classroom via learner-centered approaches. Graduate student-teachers can create a safe and active learning environment that is ripe for student engagement by building strong rapport, facilitating and engaging discussions, and by communicating the learning objectives.

Building strong professional connections is paramount to student success. When rapport is established there is resulting student commitment, as discussed by Knaack (2011), where students demonstrate their engagement via a greater inclination to study for class (Benson, Cohen & Buskist, 2005), improved uptake of knowledge (Benson, Cohen & Buskist, 2005; Wilson, 2006), and more motivation to perform and learn (Buskist & Saville, 2004; Christenson & Menzel, 1998; Frymier, 1993, 1994; Huff, Cooper & Jones, 2002; McCombs & Whistler, 1997; Wilson & Taylor, 2001). With these types of learning outcomes, establishing rapport with students is vital to student-centered learning. Knaack (2011) suggested rapport building strategies such as learning students' names, using supportive comments, physically moving about the classroom, using good eye contact, and soliciting and addressing student feedback through formative assessment at various points throughout term. For a detailed description of practical rapport-building ideas, see Knaack's chapter 10 "Building Rapport & Managing the Class" in *A Practical Handbook for Educators: Designing Learning Opportunities*.

As a rapport building strategy, GS11 suggests allowing time in tutorials for students to voice any frustrations they may be experiencing learning the material: "[O]ne thing that I noticed was helpful is that I give students the time to kind of just sit down and tell me what's bothering them.... I guess by giving them that opportunity then they kind of just take it out of their system and then they focus on the material so when we're actually covering the content they would actually pay attention to what we're teaching." Once GS11's students felt as though their concerns have been heard and addressed, they engaged with the material. Using a rapport building strategy like soliciting feedback from students requires a minimal amount of time with a maximum amount of reward. When their concerns are acknowledged, these students tend to be more receptive to the material and the learning process.

Like rapport building, graduate student-teachers use discussion to promote student engagement in the classroom. In smaller tutorials and lab settings, active participation in discussion—demonstrated with a judicious mix of active talking and active listening—is a student-centered approach practiced by graduate student-teachers. However, there are certain caveats to be aware of with large class discussion-based learning. As GS12 notes, class size plays a role in student buy-in and engagement with discussion sessions: "[C]lass size is always a concern when you try to engage a lot of people. With some classes it's easy. With the ones that have, a couple of people who are really talkative and you can…once you've built that comfort into the class, you can encourage the shy people to speak but I think class size is always a concern that you have as a TA." GS12 rightly notes size and rapport dynamic as elements that can encourage or encumber student engagement in the learning of the material. Strategies that could improve discussion in a larger class setting include working in smaller groups, providing guiding questions that students answer before classroom discussion, and inviting quieter students to voice their thoughts via online discussion forums. For more strategies on incorporating discussion into large classes, see the video by Dr. Corly Brooke at Iowa State University provided in the References section. Creating a classroom where students feel heard and their ideas valued, regardless of the class size, generates an engaged learning environment.

Just as strong rapport and thoughtful discussion have proven effective in engaging student learning, having learning objectives enhances student commitment. As Knaack (2011) stated, "[w]hen students know why an instructor is doing something…they are more likely to be engaged" (196). A learning objective is simply a statement that helps keep the instructor and their students focused on a learning goal that is performable (apply, construct), states the conditions for learning to occur (in a written assignment, in the lab), and lists the criteria of the performance (accuracy, quality). An example of a learning objective for a composition course is: "By the end of today's tutorial session, you [the student] should be able to construct [performance] a complete sentence [condition] using a noun and a verb [criteria]." Graduate student-teachers should develop learning objectives for each class/lab session in concert with their instructor of record.

Faculty members themselves note the importance of graduate student-teachers seeking out the faculty as a support. For example, Robert believes that the teaching and learning centre and the supervisor are invaluable supports for developing objectives and engaging students in the learning: "I've encouraged my grad students to take the training provided at [university], for starters. The supervisor is a great support.... [A]s the person who's usually familiar with running the course, knows about the course objectives and knows of what assessment to use for the course." As Robert made clear, the supervising instructor is the person to seek out, as the instructor knows the overarching learning outcomes of the course as a whole.

Supporting the graduate student-teacher with the tools—learning objectives—promotes undergraduate student engagement in tutorials and labs. Providing the graduate student-teachers and, in turn, their students with the roadmap outlined by learning objectives can help create an engaged student-centered learning environment.

Theme 5: Seeking and Building Support

'Just ask' was the main advice heard through the interviews. "There is no stupid question with regard to teaching. No issue is too trivial…do not be afraid to ask questions…approach the head TA; go to your fellow grad students…go to your students as well" (GS6). Similarly, when teaching a course:

> The biggest piece of advice I would give would be to talk to the other instructors and…if you're the only instructor in that course, talk to the previous instructor, get their resources, their ideas…talk to fellow grad students who have taught to find out [what] got them before,…come up with a list of questions that you need and talk to whoever—as many people as you need to (GS2).

People within the institution were a major source of information, feedback, and ideas, ranging from informal discussions to formal programs and meetings. Conversations among lab mates, fellow graduate students in hallways and offices (e.g., GS5, GS13), supportive faculty members, and even "getting together with two friends…[for] 'The Power Breakfast" (Elizabeth) provided just-in-time information, reassurance, feedback, and venting. Those who have previously TAed a course can even offer forecasts: "This is what you can expect from this class so just know when you

have an assignment to be marked [that instructor's] going to expect it to be marked the next week…the low-down on the classes" (GS7).

Formally, training, TA meetings, supervisors, and course instructors or coordinators were provided within their departments and courses (James, Robert, John, GS1, GS3, GS4, GS5, GS8), echoing departments elsewhere (Ronkowski, 1998; Walstad & Becker, 2010). The teaching support centre was another valuable formal support for answering questions and offering certificates, courses, and workshops, as well as providing teaching strategies and other resources (e.g., Mary, Linda, Barbara, GS2, GS6, GS7, GS9, GS10, GS11; expanding on Mintz, 1998).

> If I could go back…I would tell myself…to be a little bit more resourceful. I could have gone and sought out help or just a second opinion on some of the situations…that I was just feeling my way through it. Maybe to go to the teaching support centre and get a second opinion about those things and…to take advantage of what is there…the TA Orientation, there's the certificates. I would just definitely say to do those and then I would say probably the teaching course too. (GS7)

Graduate student-teachers may have informal and formal sources of information, feedback, resources, examples, and forecasts available to them; however, awareness and access can be challenging. As Elizabeth notes: "Graduate students can often feel isolated and they can feel like there aren't resources or they don't know what those resources are…anytime graduate students can kind of cluster together in some way and share experiences—either something that's formally in place or something…less formal…that's invaluable." Prior studies, similarly, found 40% of graduate teaching assistants were unaware of a central certificate program or not told by departments about training (Barrington, 2001), with awareness so low that individuals disagreed over the existence of institution-wide resources (Golde & Dore, 2004). Thus, Patricia's "advice to people seeking support: There's a little more available on campus than many people know about." In short, "just take every support…available" (GS13), and "find out what resources are available and if there aren't any—and there may not be—then create something with peers" (Elizabeth).

Conclusion

The five themes synthesize scholarly advice for graduate students currently or soon to be teaching regarding frontline work, professional relationships, student engagement, classroom environments, and support seeking. By considering the scholarship, insights, and formal and informal supports for each topic, supportive individuals, teaching centres, institutions, and researchers can consider and further explore a cohesive picture of what graduate student-teachers require to survive and thrive in their multifaceted roles.

References

Barrington, E. (2001). Encouraging professional training of graduate teaching assistants. *Journal of Graduate Teaching Assistant Development, 8,* 107-113.
Becher, T., & Trowler, P. R. (2001). *Academic tribes and territories: Intellectual enquiry and the culture of disciplines* (2nd ed.). Maidenhead, Berkshire, UK: Open University Press.

Benson, T. A., Cohen, A. L., & Buskist, W. (2005). Rapport: Its relation to student attitudes and behaviors to teachers and classes. *Teaching of Psychology, 32*, 237-239.

Bentham, S. (2011). A teaching assistant's guide to managing behavior in the classroom. New York: Routledge.

Biglan, A. (1973). *The characteristics of subject matter in different academic areas. Journal of Applied Psychology, 57, 195-203.* doi:10.1037/h0034701

Brooke, C. (Speaker). (2009, September 1). *Managing a discussion in a large class* [YouTube video]. Retrieved from http://www.celt.iastate.edu/teaching/video/managing-discussion.html

Buehler, M., & Marcum, A. (2007). Looking into the teaching crystal: graduate teaching and the future of political science. *Journal of Political Science Education, 3*, 21-38. doi:10.1080/15512160601115372

Buskist, W., & Saville, B. K. (2004). Rapport-building: Creating positive emotional contexts for enhancing teaching and learning. In B. Pearlman, L. I. McCann, & S. H. McFadden (Eds.), *Lessons learned: Practical advice for the teaching of psychology* (Vol. 2, pp. 149-155). Washington, DC: American Psychological Society.

CAGS [Canadian Association for Graduate Studies]. (November 2008). *Professional skills development for graduate students*. Retrieved from http://www.cags.ca/media/docs/cags-publication/Prof%20Skills%20Dev%20for%20Grad%20Stud%20%20Final%2008%2011%2005.pdf

Cho, Y. J., Kim, M., Svinicki, M. D., & Decker, M. L. (2011) Exploring teaching concerns and characteristics of graduate teaching assistants, *Teaching in Higher Education*, 16, 267-279. doi:10.1080/13562517.2010.524920

Christenson, L. J., & Menzel, K. E. (1998). The linear relationship between student reports of teacher immediacy behaviors and perceptions of state motivation and cognitive, affective, and behavioral learning. *Communication Education, 47,* 82-90.

Copland, S. (2009). Making it (New) as a graduate teaching assistant. *Moderism/modernity, 16,* 485-488. doi:10.1353/mod.0.013*3*

Craig, W., M., & Pepler, D. J. (2007). Understanding bullying: From research to practice. Canadian Psychology, 48(2), 86-93. doi:10.1037/cp2007010

Dale, M. (2010). Trends in the Age Composition of College and University Students and Graduates. *Education Matters: Insights on Education, Learning and Training in Canada, vol. 9, no. 1.* Retrieved from http://www.statcan.gc.ca/pub/81-004-x/2010005/article/11386-eng.htm

Erikson, E. H. (1963). Childhood and society. New York: W. W. Norton & Company Inc.

Fichten, C. S., Asuncion, J. V., Barile, M., Robillard, C., Fossey, M. E., Lamb, D. (2003). Canadian postsecondary students with disabilities: Where are they?. *Canadian Journal of Higher Education, 33(3),* 71-130.

Freiberg, H., & Lapointe, J. (2006). Research-based programs for preventing and solving discipline problems. In C. Evertson & C. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 735-786). Mahwah, NJ: Lawrence Erlbaum.

Frymier, A. B. (1993). The relationships among communication apprehension, immediacy and motivation to study. *Communication Reports, 6*, 8-17.

Frymier, A. B. (1994). A model of immediacy in the classroom. *Communication Quarterly, 42,* 133-144.

Girard, K. (2012). Surviving the first year: Peer mentorship for graduate students. *Communiqué 40*(7), 35.

Golde, C. M., & Dore, T. M. (2004). The survey of doctoral education and career preparation: The importance of disciplinary contexts. In D. H. Wulff, A. E. Austin, & Associates (Eds.), *Paths to the professoriate: Strategies for enriching the preparation of future faculty* (pp. 19-45). San Francisco, CA: Jossey-Bass.

Hirschy, A. S., & Wilson, M. (2002). The sociology of the classroom and its influence on student learning. *Peabody Journal of Education, 77*(3). 85-100. doi:10.1207/S15327930PJE7703_5

Huff, L. C., Cooper, J., & Jones, W. (2002). The development and consequences of trust in student project groups. *Journal of Marketing Education, 24,* 24-34.

Jenkins, L. N., & Demaray, M. K. (2012). Social support and self-concept in relation to peer victimization and peer aggression. Journal of School Violence, 11(1), 56-74. doi:10.1080/15388220.2011.630958

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005) Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry, 62*, 593-602. doi:10.1001/archpsyc.62.6.593.

Klimstra, T. A., Hale, W. W., III, Raaijmakers, Q. A. W., Branje, S. J. T., & Meeus, W. H. J. (2010). Identify formation in adolescence: Change or stability?. *Journal of Youth and Adolescence, 39*, 150-162. doi:10.1007/s10964-009-9401-4

Knaack, L. (2011). *A practical handbook for educators: Designing learning opportunities.* Whitby, ON: de Sitter Publications.

Kreber, C. (2002). Teaching excellence, teaching expertise, and the scholarship of teaching. *Innovative Higher Education, 27, 5-23.* doi:10.1023/A:1020464222360

Lovitts, B. E. (2004). Research on the structure and process of graduate education. In D. H. Wulff, A. E. Austin, & Associates (Eds.), *Paths to the professoriate: Strategies for enriching the preparation of future faculty* (pp. 115-136). San Francisco, CA: Jossey-Bass.

Marincovich, M., Prostko, J., Stout, F., eds. (1998). The professional development of graduate teaching assistants. Boston: Anker Pub.

Marquis, E., Jung, B., Fudge-Schormans, A., Vajoczki, S., Wilton, R., Baptiste, S., and Joshi, A. (2012). Creating, Resisting or Neglecting Change: Exploring the Complexities of Accessible Education for Students with Disabilities. *The Canadian Journal for the Scholarship of Teaching and Learning*, 3 (2), Article 2. doi:10.5206/cjsotl-rcacea.2012.2.2 Retrieved from http://ir.lib.uwo.ca/cjsotl_rcacea/vol3/iss2/2

McCloy, U., & DeClou, L. (2013). Disability in Ontario: Postsecondary education participation rates, student experience and labour market outcomes. Higher Education Quality Council of Ontario Issue Paper No. 14. Retrieved from http://www.heqco.ca/SiteCollectionDocuments/At%20Issue%20-%20Disability%20in%20ON_ENG.pdf

McCombs, B. L., & Whistler, J. S. (1997). *The learner-centered classroom and school: Strategies for increasing student motivation and achievement.* San Francisco, CA: Jossey-Bass.

Mintz, J. A. (1998). The role of centralized programs in preparing graduate students to teach. In M. Marincovich, J. Prostko, & F. Stout (Eds.), *The professional development of graduate teaching assistants* (pp. 19-40). Boston, MA: Anker.

National Institute of Mental Health (2005). Mental illness exacts heavy toll, beginning in youth. Retrieved from: http://www.nimh.nih.gov/science-news/2005/mental-illness-exacts-heavy-toll-beginning-in-youth.shtml

Nyquist, J., Wulff, D.H. (1996). Working effectively with graduate students. Thousand Oaks, CA: Sage Publications.

Park, C. (2004). The graduate teaching assistant (GTA): Lessons from North American experience. *Teaching in Higher Education, 9*, 349-361. doi:10.1080/1356251042000216660

Pentecost, T; Langdon, L.; Asirvatham, M; Robus, H; Parson, Robert. (2012). Graduate teaching assistant training that fosters student-centered instruction and professional development. Journal of College Science Teaching, 41(6), 68-75.

Piccinin, S. J., Farquharson, A., & Mihu, E. (1993). Teaching assistants in Canadian universities: An unknown resource. *The Canadian Journal of Higher Education, 23*, 140-117.

Pliner, S. M., & Johnson, J. R. (2004). Historical, Theoretical and Foundational Principles of Universal Instructional Design in Higher Education. *Equity and Excellence in Education, 37,* 105-113. Retrieved from: http://websvr.smith.edu/deanoffaculty/Pliner%20and%20Johnson.pdf

Richlin, L. (2001). Scholarly teaching and the scholarship of teaching. In C. Kreber (Ed.), *Revisiting scholarship: Perspectives on the scholarship of teaching* (pp. 57-69). *New Directions for Teaching and Learning,* No. 86. San Francisco, CA: Jossey-Bass.

Robb, M., & John, C. M. (2005). *Our words, our ways: Teaching First Nations, Métis and Inuit learners.* Edmonton, AB: Alberta Education-Aboriginal Services Branch and Learning and Teaching Resources Branch.

Ronkowski, S. A. (1998). The disciplinary/departmental context of TA training. In M. Marincovich, J. Prostko, & F. Stout (Eds.), *The professional development of graduate teaching assistants* (pp. 41-60). Boston, MA: Anker.

Roy, Parker. (2012). Skill development in graduate education. *Molecular Cell, 46*(4), 377-81. doi:10.1016/j.molcel.2012.05.003

Russell, J. (2009). A survey of basic instructional program graduate teaching assistant development and support processes (Research Note—Pedagogy). *Research Quarterly for Exercise and Sport, 80*, 792-795.

Sachs, D. & Schreuer, N. (2011). Inclusion of students with disabilities in higher education: Performance and participation in student's experiences. *Disabilities Studies Quarterly, 31(21).* Retrieved from http://dsq-sds.org/article/view/1593/1561

Saroyan, A., Dagenais, J., & Zhou, Y. (2009). Graduate students' conceptions of university teaching and learning: formation for change. *Instructional Science, 37*, 579-600. doi:10.1007/s11251-008-9071-8

Smith, K. S. (2001). Pivotal events in graduate teacher preparation for a faculty career. *The Journal of Graduate Teaching Assistant Development*, 8(3), Stillwater, OK: New Forums Press.

Spohrer, K. (2008). The teaching assistant's guide to emotional and behavioral difficulties. (2008). Teaching assistant series. New York: Continuum.

Statistics Canada. (2013). *Canadian postsecondary enrolments and graduates, 2011/2012* (The Daily November 27. 2013). Retrieved from: http://www.statcan.gc.ca/daily-quotidien/131127/dq131127d-eng.htm

Tisdell, E. J. (1993). Interlocking systems of power, privilege, and oppression in adult higher education classes. *Adult Education Quarterly, 43*(4), 203-226. doi:10.1177/0741713693043004001

Walstad, W., & Becker, W. (2010). Preparing graduate students in economics for teaching: Survey findings and recommendations. *Journal of Economic Education, 41,* 202-210. doi:10.1080/00220481003613888

Waterman, A. S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology*, *18*, 341-358. doi:10.1037/0012-1649.18.3.341

Wilson, J. H. (2006). Predicting student attitudes and grades from perceptions of instructors' attitudes. *Teaching of Psychology, 33,* 91-94.

Wilson, J. H., & Taylor, K. W. (2001). Professor immediacy as behaviors associated with liking students. *Teaching of Psychology, 28*, 136-138.

Wolanin, T. R., & Steele, P. E. (2004). Higher education opportunities for students with disabilities: A primer for policy makers. Report by the Institute for Higher Education Policy Retrieved from http://www.ahead.org/uploads/docs/resources/ada/Opportunities%20for%20Students%20with%20Disabilities.pdf

Wulff, D. H., Austin, A. E., Nyquist, J. D., & Sprague, J. (2004). The development of graduate students as teaching scholars: A four-year longitudinal study. In D. H. Wulff, A. E. Austin, & Associates (Eds.), *Paths to the professoriate: Strategies for enriching the preparation of future faculty (*pp. 46-73). San Francisco, CA: Jossey-Bass.

Young, S., & Bruce, M. A. (2011). Classroom community and student engagement in online courses. *MERLOT Journal of Online Learning and Teaching, 7*(2), 219-230. Retrieved from http://jolt.merlot.org/vol7no2/young_0611.htm