Preparing Teaching Assistants (TAs): A National Survey of Canadian Post-secondary Institutions' TA Orientations

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Introduction

This report represents the results of a research project undertaken by the Teaching Assistant and Graduate Student Advancement (TAGSA) Executive Committee, which



sought to ascertain the general characteristics of teaching assistant (TA) orientation frameworks at post-secondary institutions across Canada. TAGSA is a special interest group of the Society for Teaching and Learning in Higher Education (STLHE). Broadly speaking, TAG-SA seeks to raise the profile of TA and graduate student development in Canada and to provide leadership in highlighting initiatives to develop teaching skills and other professional skills in graduate students.

The project builds on (1) previous research by TAGSA into the state of TA professional development (Pro-D) in Canada, and (2) on the model TA orientation (TAO) classification system developed by Spencer Robinson at Ohio State University. The former report, published

in 2011, provided a unique snapshot of the TA Pro-D initiatives in place around the country (see Korpan 2011). Robinson's (2011) article, produced as part of a wider project intending to map the rage of graduate student Pro-D programs in North America, classified TAOs based on a nine-question survey that was sent to a selection of 20 research-intensive public universities, including two in Canada (Queen's University and the University of Calgary). Using Robinson's questions as a starting point, our aim was to undertake a comprehensive survey of TAOs in Canada. The following report is intended to inform future program development by allowing developers to assess, and potentially enhance, their TA training programmes using the qualitative and quantitative descriptions contained herein. In addition, we hope that this report will encourage and inform the building of a set of TA competencies, developed by TAGSA and currently in the the testing phase.

Beginning with the premise that TAOs are the most common form of structured Pro-D opportunities available to graduate students, Robinson sought to ascertain the goals, content, quality and success of TAOs. He hoped that his study might "serve as a foundation for future research that will help establish guiding principles for orientations by looking at practices at a variety of institutions" (Robinson, 2011, p. 20). Robinson's study revealed a striking diversity in the structures of TAOs offered, though he qualifies that this could be an illusion created by the small sample size. Other aspects of his survey results stand out for us. Required attendance at TAOs led to higher participation rates but also potentially increased up-front costs to the institution. Centrally-designed curricula tended to provide broad coverage and reduced redundancy but could lead to generic offerings, whereas department-led orientations were more specific and detailed.



In the end, Robinson argues that more research is needed on curriculum decisions, preparation methods, feedback procedures, impacts and effectiveness, research which hopefully will lead to new standards being defined and implemented. Ideally, a balance should be struck between centralized and open offerings in order to ensure key institutional policies and resources are addressed, while recognizing the varied interests and experience levels of TAs in attendance. Robinson also argues for greater cross-institutional coordination measures, such as a "train the trainers" session. We believe our survey takes these goals a step further by narrowing our focus to Canadian institutions only, while casting a wider net within Canada.

Most published resources for TAs are very practical, and oriented toward developing skills in the classroom. For example, Ross and Dunphy (2007) compiled a wide-ranging resource covering diverse topics such as collaborative learning, classroom diversity, online and blended learning and international TA issues, to name only a few. Rarer are those studies that attempt to take a step back and look at how we, as educational developers, create programming for TA Pro-D.

Recently, Greta Gorsuch (2012) attempted to initiate a new discussion of and research on TA training in the United States. While not presenting a singular vision for how to train TAs, *Working Theories for Teaching Assistant Development* (2012) is a significant and theoretically-informed volume that moves the conversation forward by offering a number of possibilities for a more systematic and coordinated approach to TA training. A number of studies have been published in recent years that seek to address theoretical frameworks for TA training at the institutional, disciplinary or departmental level (see, for example: Muzaka, 2009; Holmes, Martinuk, Ives, & Warren, 2013; Rolheiser et al., 2013). To the best of our knowledge, ours is the first attempt at undertaking a comprehensive national survey and analysis of TAO offerings in Canada.

Preparing the Survey

We began with the assumption that our target audience would consist primarily of larger, research-intensive universities with substantial graduate programs — those institutions which generally employ the most TAs. At the same time, one of our goals was to be as comprehensive as possible and not to ignore the potential for TAs to be employed at a variety of institutions. As such, we sent our survey to 81 schools in total, including primarily undergraduate universities and community colleges.

In addition, we examined the websites of another 20 schools, but eventually excluded these from the survey for a number of reasons. This latter group included universities whose primary language is French, specialized professional and theological institutions, and smaller colleges for which we could not identify any relevant contacts who would be responsible for TA training.

For each institution surveyed, we began by examining their website, determining the presence of a "learning and teaching centre" or equivalent institute, and identifying the employees most likely to be responsible for TA Pro-D. This was not a straightforward process. Many institutions, especially large, research-intensive universities, have established dedicated teaching and learning centres with a team of educational developers and employ one or more individuals whose primary responsibility is TAs and graduate students. Smaller centres employ educational developers with a wider range of responsibilities, including but not limited to TAs. At



other institutions where TAs are employed, their Pro-D often falls under the purview of individual faculties or departments.

Of the 81 institutions we surveyed, 28 are defined as (A) "research" universities, in that they have graduate schools of 1,000 or more students; 31 are (B) "primarily undergraduate" universities; and the remaining 22 are (C) community colleges. We received completed surveys from 22 institutions, for an overall response rate of 27 percent. However, 20 respondents fall into category A, with the other two being in category B. Our response rate for our initially assumed target audience is, therefore, a very respectable 71.4%. The eagerness of our respondents to take part in this research project is a reflection of their dedication to enhancing Pro-D opportunities for TAs and graduate students and, by extension, to enhancing learning environments for students in general.



We began this project with the assumption that most research-intensive, post-secondary institutions in North America are now offering some form of university-wide orientation for new TAs at least once per academic year. Given Robinson's claim that TAOs are the most common form of structured Pro-D for graduate students, as well as anecdotal evidence from educational developers across Canada, and a quick perusal of institutional websites, this seemed a reasonable starting point. We assumed that most TAOs would be offered at

the beginning of the academic year and would introduce new TAs to the central aspects of their role. Beyond these basic criteria, our assumptions about the structure and content of TAOs were kept to a minimum.

Our survey questions were designed to give respondents ample opportunity to provide both quantitative and qualitative descriptions of their programming. The survey was divided into four sections:

- (1) Characteristics of TAOs: what are their general characteristics?
- (2) Curriculum categories: what are their contents?
- (3) TA and graduate student demographics; and

(4) TA competencies and additional information: what are the priorities of the program developers?

(1) Characteristics of TAOs:

- Are they mandatory?
- When are they held?
- Is the structure fixed or open to participants' choices?
- Is it centrally-designed?
- Who leads sessions and in what formats?
- How is feedback gathered?

(2) Curriculum categories:

- Which curriculum categories are included?
- Which specific topics and issues are addressed?
- Are there any patterns that arise in the national data?

- (3) TA and graduate student demographics
 - How many are employed as TAs?
 - What percentage are international students?
 - How many TAs take advantage of the training offered?

(4) TA competencies and additional information

• What are the most important competencies that all TAs should possess?

The answers to the above questions help paint a fascinating portrait of TA Pro-D in Canada.

Part 1: Characteristics of TAOs



Not surprisingly, most institutions do not require any mandatory training for TAs on a university-wide scale. Often, any mandatory training comes in the form of department-specific orientations, or individual consultations between TAs and the supervising instructor. In many cases, individual departments or faculties may require training, but this is not normally enforced in any way by the institution. At one university, it is mandatory that TAs attend a two-hour orientation, but the only consequence for non-attendance is that TAs are not paid for those two hours.



Another institution provides three hours of paid training, but the training is administered by individual departments, some of which make it mandatory, while others do not.

On the whole, the enforcement of mandatory training is effectively made on a department-by-department basis, with little or no institutional oversight or organization. Many institutions do encourage TAs to undertake some training, such as an orientation or a certificate program offered by the learning and teaching centre, but it is almost always on a volun-

tary (and unpaid) basis, with any mandatory training being at the sole discretion of individual departments or faculties. The requirements for mandatory training on an institutional level are so loose – when they exist at all – that we can conclude that such training is not yet a priority for most post-secondary institutions in Canada. Some respondents said that their university has no policy on TA training whatsoever. Some institutions encourage the completion of a TA training certificate, but in all cases this is a completely voluntary and unpaid process. Recommendations about TA training are usually made at the departmental level, where priorities may change depending on who is department head at the time or who the TA coordinator is when TA announcements are made. Although few universities have mandatory TA training, almost all offer some form of voluntary program. Ninety percent of the respondents to our survey claimed that they offer a university-wide orientation for new TAs.

Additionally, 75% said that they offer more than one TAO each year. For those that offer more than one orientation, there is normally a primary offering, such as a "TA Day" or "Graduate Student Conference", at the beginning of the academic year, followed by specialized workshops in subsequent weeks and throughout the year. In fewer cases, there is a large, university-wide TA orientation held in September and then supplemented by a smaller offering in January. In fact, 90% said that their primary TAO was offered either immediately prior to or during the fall term. Sometimes these orientations are offered by a teaching and learning centre, while in other cases they are organized by the faculty of graduate studies. In one case, both centres offered separate orientations - one being pedagogical in nature, and the other introducing TAs to their contracts and administrative issues – resulting in confusion among TAs who did not know which orientation should take priority.

As Robinson also found, TAOs come in a wide variety of forms. Our survey considered the question of form, based on six discrete categories: schedule, duration, structure, curriculum, presenters and delivery format. In Robinson's study, a one-day orientation held immediately before the fall term was most common. Our survey turned up a similar result, with the most common duration (50% of respondents) being a full-day orientation (see Fig. 1 below).

While there is some uniformity in terms of scheduling, the duration of TAOs varied widely beyond the most common full-day offering. Some orientations were as little as 1-2 hours, while others were as long as two days, four days and a week-long TA orientation in one case.



We also asked respondents to tell us whether the structure of their TAO was fixed, open or a mix of these two options. For example, some schools may require that all TAs in the sciences participate in workshops designed specifically with science TAs in mind, while others may offer a range of options and allow participants to decide for themselves.

Again, not surprisingly, the respondents' answers reveal significant diversity. Fifteen percent said their orientation structure is fixed and designed specifically for an interdis-



ciplinary audience. In one case, the format is decided upon by individual faculties and departments. In another case, all participants attend the same sessions over the course of a two-day program. Fifty percent of respondents arrange their TAOs with an open structure. The most common approach is to offer concurrent sessions so TAs have the ability to design their own schedules based on their disciplines, interests and experience level. Several respondents said they design their orientations in streams, to accommodate differences between disciplines. One respondent commented that this form of organization was done, "mostly to accommodate fantasies of those in Science and Engineering, who believe that their TA needs are unique and special. However, their TAs disagree, so

the streams don't have much of an effect."

Finally, 35% responded that their TAO has a mixed structure of fixed and open sessions. The fixed components of these TAOs commonly take the form of a plenary speaker, or two to three plenary sessions, while the open components allow TAs some flexibility in determining the remainder of their schedule, such as concurrent sessions. In other cases, the TAO is fixed for one discipline or experience level and open for others. For example, one respondent said they had a specific TAO for liberal arts while other departments participate in an open TAO. Another said that the TAO structure was fixed for new TAs, as a mandatory part of their contract, while there are additional optional workshops that TAs can choose to attend or not.

For the majority of TAOs (70%), the curriculum is designed in part by a central organization and in part by the presenters themselves. In some cases, organization was undertaken by one or the other. Twenty percent of respondents said the TAO was centrally-designed: presenters were asked if they wanted to focus on a particular area and the organizers took suggestions for possible sessions, but the sessions were themselves centrally-designed.

In two cases, sessions were designed entirely by the presenters themselves with limited direction and learning outcomes provided by a central office. In most cases, the design of

a TAO curriculum is a distributed team effort where the program as a whole is organized by a central committee or director, with some sessions being pre-planned, while the remainder of the program is filled out by sessions proposed by individual presenters. One respondent summarized a common view:

"We have categories of workshops that are perennially useful, basics of teaching and learning. But within those categories, facilitators have a lot of freedom. They are guided and provided with advice, but not compelled (we choose facilitators carefully). There are also spots open each year for new workshops, experiments and special topics."



Some organizers ask higher-level administrators to make presentations, such as a vice provost or university president. Generally, the presenters at TAOs are drawn from a wide range of backgrounds and roles in the institutions, but each TAO normally incorporates the perspectives of faculty and instructors, educational developers, graduate students and support staff. This allows for the organizers to ensure that key topic areas are covered while also allowing for presenters and workshop designers to draw on their particular areas of expertise. TAO organizers have a number of presentation formats available to them (see Figs. 2 & 3). We asked respondents to select from a list of formats and provide a percentage weighting for each format they employ.



Not surprisingly, the most commonly utilized format is the interactive workshop, with 95% of respondents saying they used these in their TAOs. Overall, TAOs are organized using a variety of formats corresponding to the nature of the individual sessions, the preferences of the presenter and the structure of the TAO itself.

Constructive feedback is essential to the program design process. As one respondent commented, "I decide on topics based on the previous year's feedback. I choose different presenters each year, and they create their own presentations."

One hundred percent of our suvey respondents said that they collected feedback from TAO participants. However, methods for collecting that feedback varied. The most common form of feedback utilized was a paper version completed at the end of the whole orientation, with 60% of respondents saying they collected feedback in this manner (see Fig. 4).

Other forms included a paper version completed for each session (40%), an online version

	In paper for each session	In paper for entire TAO	Online for each session	Online for entire TAO
<60%	0	2	1	6
60-79%	3	1	1	1
>79%	5	5	0	0

for each session (20%), and an online version for the orientation as a whole (40%). Choice of feedback format is important because it can have an impact on response rates. Some respondents claimed that their response rates were close to 100%, in cases where feedback was gathered at the same time as certificates were presented. In general, response rates vary widely, though paper versions collected during individual sessions tended to be, at least statistically, most effective.

We also asked respondents to give a rough estimate of the effectiveness of their chosen feedback methods. We wanted to find out:

(a) which formats allow organizers to determine the degree to which TAs are well-served by the TAO; and

(b) which formats provide feedback to facilitate strategic adjustments to programming offered.

Interestingly, responses here also varied. Some respondents claimed online formats were most effective because not everyone always attends the whole orientation. Others said a delayed online feedback process, though resulting in a lower overall response rate, allowed TAs to respond to the effectiveness of the TAO,

based on how it helped them in their actual roles. One respondent said that, even though they had a low response rate, the online feedback process ". . gives enough information to confirm what is working and what needs to change, such as a

really bad presentation that can be avoided next time."

Conversely, paper formats tended to have higher response rates overall but with feedback that was ultimately of limited use. Immediate feedback on paper, whether in individual sessions or for the orientation as a whole, is useful in providing formative feedback to presenters while the experience is fresh in participants' minds. In a TAO spanning more than one day, such feedback can even be utilized to make adjustments for the next day. Many respondents said they used a combination of both open-ended and likert scale questions in their paper feedback that allowed for comparisons over time, while detailed feedback responses can be used to assess overall effectiveness on a yearly basis.

In some ways, it seems that online and in-person forms of feedback have complementary strengths. As one respondent claimed, "They are both useful. The Centre relies primarily on the online feedback, while the paper ones are intended to be more formative for presenters." In-person formats tend to yield higher response rates, with immediately useful formative feedback, while an online format, though generally yielding a lower response rate, allows for more reflective feedback and more detailed responses.

In addition to asking about feedback rates and formats, we also asked about the



types of questions that were included. In addition to our prepared categories, respondents also said that they asked about overall usefulness, significant things learned, uppermost questions remaining, usefulness of specific resources, and relationship to anticipated experience and duties. Whatever feedback formats were used, the importance of carefully crafting questionnaires and gathering responses was

emphasized across the board.

The charts on the next page show the percentage of respondents who used the feedback questions listed:





Part 2: Curriculum Categories

In the second part of our survey, we asked respondents to tell us more about their curriculum choices. We based our questions on the categories identified by Robinson: university policies, students, teaching, professional development, campus resources and educational technology.

We also included an "other" category to catch any unanticipated topics. Not unexpectedly, all survey respondents claimed that their TAOs covered issues related to students and teaching, while the vast majority also covered areas related to campus resources, university policies, professional development and educational technology.

Within these broad categories, we asked respondents to elaborate on their offerings by identifying specific topic areas. These responses reveal trends in the priorities of TAO organizers. Some of the most popular (\geq 80%) categories include: student feedback, encouraging student engagement, classroom management, evaluating essays and exams, writing centre, TA basics, labs, resources for students with disabilities, tutorials/discussion groups, writing feedback and time management.

In the end, our statistics only tell us what curriculum choices are made; they do not tell us why.



Students















Part 3: TA and Graduate Student Demographics

With this section of the survey, our original intent was to attempt to identify which disciplines tend to participate in university-wide TAOs and how those numbers compare nationally. We also wanted to determine the general composition of the TA population in Canada. Are all TAs graduate students? How many are undergraduates? How many are PhD students and Masters students? We were surprised at how difficult it was to obtain this information, so we asked for our respondents to make their best estimates if they did not have concrete figures on hand. However, we do feel that greater institutional awareness of the demographics of the TA population would provide essential data for use in program design.

The first question we asked was about the numbers of TAs employed at the institution. It was assumed that these numbers would be reasonably accessible, so we were surprised with the number of respondents who found that this information was not available. Some said that these statistics were only tracked at the department rather than at the institutional level. Others said that these stats are not tracked at all. Almost half of respondents (43%) were able to provide rough estimates, while still fewer (24%) were able to give exact figures. When we asked about further details, such as the number of undergraduates and international students employed or the breakdown of the TA population by facul-

ty, many respondents again found it difficult to obtain these figures. Some respondents went to great lengths in contacting deans, faculty representatives and administrators to access the relevant data. We are grateful for their effort and dedication.

Though undergraduates generally make up a small proportion of the TA population, we found that a full twothirds of institutions employ undergraduate TAs; and in several cases, undergraduates made up over 10% of the TA population – as high as 35% at one



school. About 30% of respondents were unable to find any figures, with a few saying that these records are not tracked. It is almost impossible to determine what types of roles undergraduates are employed in, but several respondents did offer some ideas. One claimed that the few undergraduates employed were all in marking positions. One fascinating response indicated a considerable variance across disciplines: "In Business, for example, most (TAs) are undergrads. In science and engineering, most are grad students, and in some (like physics and chemistry), undergrad TAs are not allowed. Other disciplines are mixed."

International TAs represent a distinct category of graduate students, one with a



unique set of needs. Since they often come from different cultural backgrounds and educational systems, ITAs often require specific training and orientation to academic life in Canada. As such, we were interested to know the magnitude of ITA populations at universities across the country. At some institutions, these numbers were again difficult to obtain or not tracked at all. However, we did find out that ITAs form a significant portion of the over-

all TA population – between 30% and 50% at many institutions.



Like with undergraduate TAs, several respondents pointed out that these numbers vary widely across disciplines. At one institution, ITAs make up more than 60% of the TA population in sciences and engineering, but only 20-25% otherwise.

Another respondent estimated that the percentage would be considerably higher in engineering and computer science, though he could not provide an exact number. Illustrated is a graphic breakdown of TA and ITA populations at two institutions, A and B. These are not intended to be representative, but are used to illustrate two possible scenarios. Both examples are from midsized, research-intensive universities.

Typically, attendance rates at TAOs fall between 100 and 200 TAs at a given institution. Overall, this roughly equates to a 20% attendance rate. Why are attendance rates so low? This is a question that many programmers struggle to answer, and we do not have a simple response. Mandatory training would certainly increase atten-

Example A - TAs by Discipline







dance. For many institutions, this expense is simply not fiscally possible, though one might argue that the benefits of employing an adequately-trained workforce outweigh the expense of providing that training. Some institutions offer added incentives such as free lunch, prize draws and certificates of recognition. Professional development is in itself an incentive for some TAs, but not all. In many cases, TAOs are not the only professional development programs available to TAs, ones that are strictly related to TA work. Seventy-six percent of respondents said there were other programs available to their graduate students besides the primary TAO. Eighty-six percent of respondents said that individual faculties offered their own TA training programs.

Many teaching and learning centres offer some sort of professional development certificate program, individual departments provide TA training specific to their units, and programs like the Instructional Skills Workshop are often available to graduate students. At several institutions, senior TAs are hired to provide mentorship and guidance to TAs in their home departments or faculties.



Part 4: TA Competencies and Conclusion

In general, TA competencies include the knowledge, skills, attitudes and behaviours required for TAs to perform their roles effectively. We hope that this research project will provide data that can be used in the development of a set of TA competencies that may then be used as guidelines for universities across the country. To this end, we asked respondents to list, in their opinion, the top three most important competencies that TAs at their institution should possess.

In some ways, there was a significant degree of overlap in responses, but there were also some interesting outliers. Not surprisingly, the most common responses tended to cluster around such areas as: knowledge of and ability to use effective teaching and assessment strategies (36%); knowledge of learning theory, especially learner-centred approaches (27%); positive interactions with students (27%); caring, empathy and respect for diversity (23%); time management (23%); professionalism, ability to exercise good judgment, and fairness (23%); providing constructive and targeted feedback (23%); facilitating discussions, tutorials, seminars and labs (23%); and strong

interpersonal skills such as communication (23%).

Other competencies our respondents suggested include: problem solving and creativity, the ability to find and utilize support services, effective use of educational technologies and learning management systems, and self-reflection. Somewhat surprisingly, content knowledge was very low on the list, with only two respondents saying that this



would be in their top three competencies. The vast majority of respondents (95%) felt that their TAOs supported TAs in developing the competencies identified as important.

In some cases, respondents said that their TAOs were designed with these competencies specifically in mind; the competencies identified were used as learning outcomes in the design of the overall program. In most cases, TAOs provided an introduction, while further workshops and opportunities were necessary to effectively inculcate the expressed values. As one respondent said, "the orientation is intended to whet their appetites for further, more meaningful educational development."

Another respondent said that their TAO was coordinated with other ser-

vices on campus, "to offer a comprehensive program for helping graduate students achieve these competencies." One respondent extended their argument to include the undergraduate students who benefit from having well-trained TAs: "In its current form, our TAO serves to boost graduate students' confidence in the classroom by exposing them to discussions of student support, small group teaching, and approaches to helpful assessment that will provide a basis for a positive experience for both the TA and their students." For almost all respondents, a careful integration of expressed TA competencies with TAO learning outcomes was essential to the success of the TA training program.

Despite overall satisfaction with the programming offered, most respondents did feel that there was room for improvement. Respondents identified three key areas in which their TAOs could be improved: (1) mandatory attendance; (2) more open dialogue between the learning and teaching centre and graduate studies, as well as individual faculties and departments; and (3) integration within larger training programs. In most cases, improving the



TAO meant finding ways to increase attendance. Half of respondents argued that TA training should be mandatory for all new TAs, and TAs should be paid to attend the orientation.

Mandatory attendance would automatically increase the reach of training programs, while at the same time allowing TAO organizers to get a better sense of the needs and demographics of TA popula-

tions. Respondents also felt that the conversations with and between departments and faculties across the university were lacking. Greater coordination among campus units, as well as greater participation of graduate students themselves in the organizing process, would allow for better integration of TAO learning outcomes with those expressed by individual academic units. This would also lead to less redundancy between the university-wide orientations and those offered in specific departments or faculties.

One respondent was concerned that TAs were confused or placed in a difficult situation because they received competing, rather than complementary, invitations to various professional development opportunities. Finally, most respondents agreed that an introductory TAO is in itself insufficient to provide the training that most TAs need. Several argued that the TAO should be at least a full day event, if not more, and that learning outcomes should actually be achievable within the scope of the TAO. Some of these respondents, and others, argued that the TAO should be the beginning of a much more comprehensive training program that would include experiential learning opportunities, authentic learning activities and opportunities for reflection and feedback.

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