University Faculty Engagement in Teaching Development Activities Phase II

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Table of Contents

Executive Summary

This final report focuses on the second phase of a two-phase research project on faculty engagement in teaching development activities, which has been funded by the Higher Education Quality Council of Ontario. Professors at six publicly funded Ontario universities (Lakehead University, Laurentian University, Queen's University, Ryerson University, The University of Western Ontario and University of Guelph) were asked, first through focus groups and then through an online survey, about how they learned to teach at the university level, about their ongoing engagement in teaching development activities and about their engagement with the Scholarship of Teaching and Learning (SoTL). The focus groups were conducted with past recipients of teaching awards on each campus – and the results of the focus groups informed the design of the online survey, which went out to all faculty members at each institution.

Specifically, the research study addressed the following questions:

1. What are the approaches and methods faculty use to engage in, think about, develop and improve their teaching development?
2. Where, when and how do faculty acquire their knowledge and skills about teaching and learning?
3. What is the distribution of faculty engaged in teacher-centred, student-centred and learner-centred models?
4. Teaching and learning centres support SoTL because the theory suggests it informs teaching practice and facilitates teaching improvement. What is the level of faculty engagement with the models outlined by Akerlind (2007); Brookfield (1995); Kreber & Cranton (2000); Theall & Centra (2001); Trigwell, Martin, Benjamin, & Prosser (2000); and Weston & McAlpine (2001)?
5. What are the differences between those teachers who are engaged in teaching and learning by employing Brookfield's and other SoTL theoretical models into their teaching development activities and those who do not?
6. Do most university instructors have minimal or no formal training as teachers, such that they learn how to teach on a "trial and error" basis or a "learn by doing" approach?
7. How interested are faculty in developing as teachers by engaging in and learning about SoTL?
8. Do most faculty members believe that research is regarded more highly than teaching, and, therefore, when they prioritize time, engaging in teaching development activities is seen as less important than research activity?

There was a wide range of responses to these questions within the focus groups. For many faculty, little formal support was available when they started to teach, and they learned to teach through a variety of informal processes, including feedback from their student evaluations. In general, faculty desired a better and broader culture of teaching, including a variety of means for supporting the development of teaching.

The online survey had a response rate of close to 21 per cent of all teaching faculty at the six institutions. While it is likely that there is therefore at least some level of self-selection bias in the final survey results (as is the case with any voluntary survey of this type), it is believed that the findings reflect, at minimum, some broad trends within the faculty population, at least within the six universities surveyed.

The following is a summary of the main findings of the research:

1. What are the approaches and methods faculty use to engage in, think about, develop and improve their teaching development?

The methods and approaches that faculty use to improve their teaching are varied, encompassing both formal and informal methods – from reading general literature on teaching and using formal student evaluation forms to soliciting peer feedback and accessing resources at teaching and learning centres. Faculty responded that they engage in a number of activities regularly; for example, they tend to participate in the activities of teaching and learning centres once or twice a year, and they tend to discuss their teaching with their colleagues weekly or monthly. Nearly half of the respondents had visited centres one to four times, and satisfaction with these was generally high.

2. Where, when and how do faculty acquire their knowledge and skills about teaching and learning?

Faculty acquire their knowledge and skills about teaching and learning throughout their professional lives, with a need for substantial support especially in the early years of their teaching careers. Most respondents initially learned about postsecondary teaching through practice as a graduate assistant, and most respondents continue to learn about teaching primarily through practice, or learning by doing, as well as by consulting with colleagues.

3. What is the distribution of faculty engaged in teacher-centred, student-centred and learner-centred models?

A shift away from an emphasis on teacher-centredness and a movement toward a more student-focused and learner-centred approach to teaching is apparent from the survey, with only a very small percentage of faculty indicating that these models did not apply to their own teaching development.

4. Teaching and learning centres support SoTL because the theory suggests it informs teaching practice and facilitates teaching improvement. What is the level of faculty engagement with the models outlined by Akerlind (2007); Brookfield (1995); Kreber & Cranton (2000); Theall & Centra (2001); Trigwell, Martin, Benjamin, & Prosser (2000); and Weston & McAlpine (2001)?

When asked how often they engaged in SoTL – including reading about teaching generally and reading about teaching in their discipline – faculty tended to respond that they engaged in these activities “rarely” or “sometimes.” At the same time, they were able to

assess their own teaching on the basis of a variety of models drawn from the literature, and they believed that this was a useful means of examining their teaching practices.

5. What are the differences between those teachers who are engaged in teaching and learning by employing Brookfield's and other SoTL theoretical models into their teaching development activities and those who do not?

A very large majority of faculty indicated that they had used both the autobiographical lens and the students' lens for assessing their teaching. Half the respondents had used Brookfield's (1995) colleagues' lens and a little less than half had used the theoretical lens for assessing their teaching. Forty-one per cent of faculty had invited colleagues to provide feedback on their teaching, whereas about one-third indicated they had invited colleagues to visit their classrooms, revealing opportunities to offer faculty further development as teachers by providing activities encompassing the use of the "peer", or "colleague", lens.

6. Do most university instructors have minimal or no formal training as teachers, such that they learn how to teach on a "trial and error" basis or a "learn by doing" approach?

A very high percentage of faculty learned by doing at the beginning of their careers; the next highest percentage indicated that they had held informal discussions with their peers. The same apparently holds true for today, as 96 per cent of faculty indicated that they currently learn about teaching by doing.

7. How interested are faculty in developing as teachers by engaging in and learning about SoTL?

When faculty were asked how they currently learn about teaching, a fair number of respondents indicated that they are conducting research on teaching. Interestingly, almost the same percentage indicated that they wish they had had access to information about how to conduct research on teaching when they first started out in their teaching careers.

8. Do most faculty members believe that research is regarded more highly than teaching, and, therefore, when they prioritize time, engaging in teaching development activities is seen as less important than research activity?

The majority of faculty indicated that they "strongly agreed" or "agreed" with the statement that research pays off in status and reputation more than teaching. It is apparent that an emphasis on conducting traditional research (related to one's discipline or field) is an outcome of this belief. Furthermore, a large percentage of faculty agreed that a disparity exists between the merits of research and teaching.

Most reassuringly to the researchers, faculty who responded to the survey at the six participating universities overwhelmingly believe teaching to be important or very important to their professional practice, and most faculty emphasized the need to continue to support the development of teaching.

I. Introduction

A. Background

"Faculty Engagement in Teaching Development Activities" is a two-phased research project funded by the Higher Education Quality Council of Ontario (HEQCO), which brought together six Ontario universities to study how university professors learn to teach. This report covers Phase 2 of the project.

Researchers and faculty at Lakehead University, Laurentian University, Queen's University, Ryerson University, The University of Western Ontario and University of Guelph participated in this cross-institutional study, the first to explicitly examine how faculty learn to teach in Ontario. The leaders of this study are from their respective teaching and learning centres, with the exception of the leaders from Laurentian, which does not have an official centre but does have much expertise in the development of teaching on campus. Phase 1 of this project, a review of SoTL literature, was published by HEQCO in the fall of 2009. Phase 2, the actual research study, consisted of focus groups coupled with an online survey of faculty at the six participating universities (see Appendix A for the online survey). The focus group reports for each university are provided in Appendix B. The survey was composed of questions based on the results of the focus groups and theories related to faculty development, as well as other questions of interest to the research team. The results of the online survey are presented in aggregate format within the body of this report, with complete tables included in Appendix C.

Teaching and Learning Centre Descriptions

Of the six universities involved in this project, five have established teaching and learning centres. Table 1 shows the enrolment and faculty for each institution, as well as when the teaching and learning centres were established. For descriptions of each of these centres and how they fit into their institutional contexts, please see Appendix B.

Table1. Student enrolment and faculty per institution

Institution	Enrolment (rounded) *		# full-time faculty**	Year the teaching and learning centre established
	Full-time	Part-time		
Lakehead University (Thunder Bay, ON) Est. 1965	Undergrad: 5,800 Grad: 650	Undergrad: 1,300 Grad: 20	313	2004
Laurentian University (Sudbury, ON) Est. 1960	Undergrad: 5,700 Grad: 350	Undergrad: 2,300 Grad: 390	427	No centre
Queen's University(Kingston, ON) Est. 1841	Undergrad: 14,100 Grad: 3,260	Undergrad: 1,750 Grad: 330	840	1992
Ryerson University(Toronto, ON) Est. 1948	Undergrad: 17,000 Grad: 1,500	Undergrad: 13,700 Grad: 470	744	Teaching Committee started 1970s; office created 1993; reorganized 2003
University of Guelph (Guelph, ON) Est. 1964	Undergrad: 19,800 Grad: 2,200	Undergrad: 1,550 Grad: 200	817	1989
The University of Western Ontario (London, ON) Est. 1878	Undergrad: 25,200 Grad: 4,300	Undergrad: 3,500 Grad: 600	1,415	1979; mandate of centre expanded in 2004

* Source: Association of Universities and Colleges of Canada, 2008
**Source: Common University Data Ontario, 2008

B. Purpose of the Study

The purpose of the study was to learn about faculty engagement in teaching and learning activities, as well as to examine faculty engagement with the Scholarship of Teaching and Learning (SoTL). We wish to increase our understanding of faculty engagement in educational development in order to serve our constituents better. As the directors of

teaching and learning centres, we know the level of satisfaction of faculty participants who attend our conferences, workshops, courses and other programs. However, we do not know the overall level of faculty engagement in educational development activities at our universities beyond our teaching and learning centres' programming. Understanding faculty engagement is critical to the design and implementation of programs and resources that we offer, especially given our goal of enhancing the quality of teaching at our respective institutions. In addition, faculty views about SoTL were explored. Teaching and learning centres support SoTL because the theory suggests it informs teaching practice and facilitates teaching improvement.

II. Research Questions

Faculty members were surveyed to find out how they learn to teach and to discover their level of engagement in teaching methods and activities. The researchers examined how these activities relate to the enhancement and improvement of their teaching and to their growth and development as instructors. Specifically, the research study addressed the following questions:

1. What are the approaches and methods faculty use to engage in, think about, develop and improve their teaching development?

2. Where, when and how do faculty acquire their knowledge and skills about teaching and learning?

3. What is the distribution of faculty engaged in teacher-centred, student-centred and learner-centred models?

4. What is the level of faculty engagement with the models outlined by Akerlind (2007); Brookfield (1995); Kreber & Cranton (2000); Theall & Centra (2001); Trigwell, Martin, Benjamin, & Prosser (2000); and Weston & McAlpine (2001)?

5. What are the differences between those teachers who are engaged in teaching and learning by employing Brookfield's and other SoTL theoretical models into their teaching development activities and those who do not?

6. Do most university instructors have minimal or no formal training as teachers, such that they learn how to teach on a "trial and error" basis or a "learn by doing" approach?

7. How interested are faculty in developing as teachers by engaging in and learning about SoTL?

8. Do most faculty members believe that research is regarded more highly than teaching, and, therefore, when they prioritize time, engaging in teaching development activities is seen as less important than research activity?

III. Methods

A. Phase 1: Review of Literature

Phase 1 of this project was a review of literature. The review focused on four ways in which faculty learn how to teach: (1) self, (2) colleagues, (3) students and (4) theory (Brookfield, 1995, as well as various models of SoTL). While some faculty may learn to teach in an experiential fashion (through practice more than theory), others may learn more through reading and applied theory. Several theoretical models are examined in the review of literature. For the full report on Phase 1, see the following link on the Higher Education Quality Council of Ontario (HEQCO) website: http://www.heqco.ca/SiteCollectionDocuments/Faculty%20Engagement%20in%20Teaching%20Development%20Activities2.pdf

In addition, the summary is available at http://www.heqco.ca/en-CA/Research/Research%20Publications/Documents/Web%20Summary%20(E).pdf.

B. Phase 2: Research Study

i. Focus Groups

For the purposes of Stage 2 of this study, a series of focus groups of faculty members who had been recognized for their teaching abilities were held in March and April 2009 at each of the six institutions involved in the project. Investigators from each university were responsible for identifying and recruiting faculty members who had won national, provincial and university teaching awards. Individual award winners were then contacted via e-mail and invited to participate in focus groups facilitated by the investigators. Details about each university's specific process of recruitment can be found in Appendix B.

Overall, 14 focus groups were conducted across the six universities involved in the project, comprising a total of 75 full-time faculty member participants from a wide range of disciplines and departments. While attempts were made, where possible, to include a diverse selection of participants from all career stages, it was not possible for all institutions to have equal representation from each demographic. For example, the focus groups conducted at Queen's and Western consisted mostly of late-career faculty (16-plus years of experience), while groups at other universities included larger proportions of faculty in earlier career stages. Feedback from all focus groups was audio-recorded for later transcription and analysis. The participants received no compensation and were assured that they would not be personally identified in any subsequent reports.

ii. Online Survey

Using the themes identified from the faculty focus groups, as well as theory from the literature review, the researchers developed an online survey that was distributed to full-time faculty at the six universities. The questionnaire (see Appendix A) was divided into four parts: demographics, general questions about teaching, questions about teaching resources and questions related to the Scholarship of Teaching and Learning (SoTL). The survey was hosted and administered by the researchers at University of Guelph. Researchers at each of the six universities distributed institutionally customized e-mail invitations to their faculty. The e-mail contained a link to the survey, which meant that the same set of questions was used for all the institutions. A French version of the questionnaire was used at Laurentian for francophone faculty. In all cases, reminder e-mails were also sent out one to two weeks after the initial e-mail. Although efforts were made to restrict the survey to full-time faculty, the results included some responses from part-time faculty because a substantial number of instructors at Lakehead University were part time. In addition, some of the e-mail lists provided to the researchers were inclusive and did not separate full-time from part-time faculty. For the purposes of this study, the responses of part-time faculty were included in the final results.

IV Results: Focus Groups

A. Introduction

Focus groups were conducted to help determine the types of questions that would be useful in the survey, to gather information about teaching and learning (along with some associated wording) and to explore the attitudes, beliefs and perceptions about teaching held by award-winning teachers. In addition, some of the universities involved in the study were interested in establishing questions that would assess current faculty needs that might be met by their respective teaching and learning centres.

The focus group questions were open ended to allow for and encourage a wide range of responses and to generate an extensive list of educational development activities that could be included in the survey. Participants were asked how they learned to teach at the beginning of their careers, how they were currently learning about teaching and what they wished had been available when they were starting out in terms of help with teaching. The final question asked participants to offer advice related to teaching for faculty at three different career stages: new, mid-career and approaching retirement. All universities reported very positive experiences in conducting the focus groups.

Four questions were asked in each of the 14 focus groups. There was a wide range of responses among faculty both within each focus group and across all six universities, but the following summary describes a few of the most common responses. For more detailed

information about the responses for each university, please see the individual institution reports included in Appendix B.

B. Summary of Questions: Learning about Teaching

Question 1 – How did you learn about teaching at the beginning of your career?

For a large number of faculty respondents, no training, formal mentoring or teaching and learning centres were available for new teachers when they started their teaching careers. Thus, a common refrain was that they had learned through an informal process of trial and error or learned by doing. Many respondents described a process of osmosis. Some modelled their teaching on role models from their experiences as students by incorporating elements used by their most memorable and successful teachers and by avoiding the mistakes of less effective teachers. Some faculty spoke of observing experienced teachers through co-teaching a course or visiting colleagues' classrooms in order to observe effective teaching strategies. They mentioned that having close relationships with more experienced faculty (despite the absence of a formal mentoring program) and having the opportunity to discuss teaching with colleagues were very beneficial factors in learning about teaching at the beginning of their careers. Others had intuitively sought informal feedback from students and colleagues and used it in personal reflection on how to improve their teaching.

While these informal experiences of learning about teaching were very common among faculty, feelings of fear/anxiety were reported because of the lack of formal training. For example, participants at Queen's noted that there was an expectation among many newly hired professors that teaching would come naturally, and there was dismay in finding that this was not the case. These feelings of anxiety also prompted over-preparation for teaching, with several faculty linking these experiences back to the process of trial and error. Other respondents discussed the importance of having a desire and passion to teach from a young age. For example, a Ryerson faculty member spoke of some individuals having a "teaching gene" that predisposed the person to being an effective instructor, while others spoke of teaching as an intuitive, natural process developed through the experience of doing it.

In the case of those respondents who had some previous teaching experience or training to draw on at the beginning of their faculty careers, a wide variety of activities was mentioned, both inside and outside academia. In particular, at Lakehead and Western, some respondents noted that they drew from experiences as teaching assistants in graduate school, sessional teaching, expertise in other fields (performance, business, medicine, preaching) and teaching at the secondary or elementary levels. Also mentioned were teaching assistant (TA) training programs, courses in higher education in graduate school and, less commonly, courses, orientations and workshops at teaching and learning centres.

Course evaluations and student feedback were also mentioned as contributing to how some respondents learned about teaching, although these were usually cited as ways of

discovering one's flaws. For example, complaints and negative comments from students during the first year of teaching led some faculty to work on changing their style or on incorporating missing crucial elements.

Question 2 – How do you currently learn about teaching?

Responses were varied, both among participants within each group and across institutions. Faculty reported that they learned about teaching both informally and more formally in courses and workshops; they took advantage of the resources offered at their own institutions and also looked to outside disciplinary communities; they reflected on their teaching through feedback from students and through their own impressions of how well the students were learning; they sought out and read literature and resources on pedagogy; and they conducted their own research into effective teaching.

The informal trial and error approach was again mentioned, particularly at Queen's and Ryerson, where faculty discussed the importance of risk taking, openness and the willingness to embrace different approaches and new techniques. Faculty also noted that one should not expect new technologies to automatically improve one's teaching, but that one should not be resistant to trying something new that could represent a pedagogical or learning advantage for students. However, a significant contingent of the focus group participants emphasized that "chalk and talk" classes are valuable and that students want an engaged and responsive instructor, rather than the newest learning technology. Another informal approach included discussing teaching practices with colleagues, particularly newer faculty members and graduate students who tend to bring new ideas and energy to teaching.

Along with attending courses and workshops sponsored by teaching and learning centres, some faculty indicated that they participate in teaching-focused conferences such as those offered by the Society for Teaching and Learning in Higher Education (STLHE) and disciplinary-based conferences with teaching tracks. Some faculty are also involved in professional associations focusing on education. Others find valuable learning opportunities in guest lectures, teaching talks and roundtables organized by their departments or faculties. A number of faculty had led teaching workshops and faculty development sessions for colleagues and graduate students. Some, whose research interests include education, had taught courses in graduate programs or professional schools on teaching and learning topics. These faculty members found that the experiences of sharing knowledge and being a mentor were important in staying engaged with teaching. Also, a few participants shared that they had learned about teaching through conducting research in their classrooms and publishing the results or by incorporating aspects of teaching and learning into their own research.

Feedback from students through course evaluations, midterm assessments and other informal methods of consultation were consistently mentioned as important contributions to how faculty members learn about teaching. While the utility of the numerical rankings on course evaluations was questioned, faculty members generally valued the written comments.

Many participants talked about occasionally consulting journal articles, books and online resources such as newsletters and teaching tips sent by e-mail. As mentioned in the Guelph focus group, these pursuits are infrequent not because of lack of interest, but primarily because of time constraints.

Question 3 – What do you wish had been available when you were starting out in terms of help with teaching?

The majority of responses to the question about what faculty members most wished had been available when they started teaching revolved around a general desire for a better culture of teaching both within the department and the larger institution. Mentorship was described as a very important element in fostering a supportive teaching culture, but not all participants endorsed the creation of formal mentoring programs. Some thought a mandatory program would reach those who might not ask for help otherwise, but others said it could be problematic; for instance, some faculty may not be interested in pursuing a teaching certification. Nevertheless, many faculty members expressed a desire for collegial support and for validation from chairs and deans that teaching is valued beyond its intrinsic rewards.

Of the faculty who had started their careers when the resources of a teaching and learning centre were not available, several said that a centre would have been an invaluable resource, particularly if sessions had focused on the fundamentals of teaching. Specific examples mentioned included guidance concerning how to engage students, pedagogical training and best practice examples for grading and assessment.

Participants also indicated a desire for the following:

- more faculty or department-specific support for teaching
- practical introductions to teaching resources available
- encouragement to take courses about teaching
- department teaching talks
- a set of expectations about teaching and course preparation
- a greater focus on navigating the administrative aspects of teaching.

C. Summary of Advice

The fourth, and last, question posed to focus group participants was this: What advice do you have for new teachers, mid-career teachers and those approaching retirement related to teaching?

New Teachers

New faculty were advised to seek out support and to take advantage of the resources of teaching and learning centres, as well as using any resources available in departments. Because new teachers can often feel alone, the participants advised them to seek out consultations with, and feedback from, peers and mentors, as well as seeking out

consultations with staff at teaching and learning centres, in order to avoid feeling isolated. Many participants stressed the importance of talking about teaching, observing experienced colleagues and discussing teaching problems.

A recurring theme throughout the focus groups was the importance of finding the right balance of teaching, research and other academic duties. While most faculty agreed that teaching should be "taken seriously," they cautioned that one should ensure that efforts were made relative to what is considered important. Thus, it was considered crucial for new faculty to understand the level of departmental support afforded to teaching and research and to learn about the political context of their program, department and institution.

Many participants commented that new faculty should devote attention to getting to know and engage their students. At Ryerson, for example, it was suggested that the more that faculty members know about students, the more they can do to inspire their students, rather than simply conveying content. Several advised that it was beneficial to seek feedback from students throughout the course in order to adjust and take into account student learning. Faculty also advised that new teachers should be confident in personality and teach within their own style and that they should avoid mimicking, in order to avoid being seen as a "phony" by students. They should also not be afraid to be wrong or show vulnerability because failures should be seen as learning opportunities.

Mid-career Teachers

Teachers in the mid-career phase were primarily advised to "mix things up," to try new things and to have fun. Some suggestions along these lines included the following: making requests to teach new courses and new material, staying abreast of current events and including them in courses, investigating how understanding learning styles can help teaching and exchanging ideas with other inspired teachers. It was mentioned that faculty should be aware that they can request a shift in focus if they feel themselves getting into a rut and that they should take opportunities for personal and professional growth.

Participants also suggested becoming a liaison person for the department by sharing information about best practices and innovation across faculties, colleges and disciplines at the university, as well as at disciplinary conferences. Some recommended taking a role in curriculum and program redevelopment. Experimenting, trying new things and collaborating with a network of newer faculty were seen as vital to staying energized and continuing to learn about teaching. Mid-career faculty were also advised to spread the word about the value of pedagogical research in order to increase the profile of research about teaching.

Teachers Approaching Retirement

Most of the advice to faculty who are approaching retirement involved suggestions about avoiding complacency and maintaining passion in teaching. Some suggestions included connecting with younger colleagues in order to benefit from their perspectives and ideas

about teaching, staying current through rediscovering the literature and taking risks because “there’s nothing to lose.” There was some discussion about the role of the institution in allowing veteran faculty to focus on areas suited to their own strengths – for example, de-emphasizing either teaching or research so that complacency and burnout are avoided.

Participants also stressed the importance of sharing experiences. For example, faculty nearing retirement have the benefit of offering a historical perspective and can provide insights into why things are done the way they are. They can also caution about teaching fads that have not maintained their value. In addition, because veteran faculty possess a wealth of knowledge and experience, steps should be taken to facilitate passing on this invaluable knowledge before retirement so that younger faculty can benefit from the wisdom of more experienced faculty.

D. Conclusions of Focus Groups

The following points summarize recurring and interesting themes that emerged during the focus group conversations with faculty participants:

Major Points about Teaching

- Ongoing mentoring is important throughout one’s career; mentoring is a two-way interaction.
- It is valuable to disseminate best practices through peer networks.
- Learning about teaching should be an important component of training for academics.
- Keeping up to date and trying new approaches, risk –taking and experimentation are vital to staying engaged with teaching.
- Teaching is about passion for students and for the discipline; participants overwhelmingly expressed passion.
- Technology should not become the “main event”; it should serve good pedagogy.
- Scholarship on teaching and learning is important for enhancing best practices.

Barriers in Learning about Teaching

- Teaching is perceived to have lower value than research (but there are exceptions within certain administrations/departments).
- There seems to be an overemphasis on research funding and a lack of incentives for SoTL.
- A substantial amount of work is required above and beyond instruction and associated teaching responsibilities (based on 40 per cent teaching, 40 per cent research, 20 per cent service); research and service requirements take up significantly more than 60 per cent of faculty time, so teaching time suffers.
- There is still a relatively abrupt transition from graduate student to faculty positions, with little or no support for learning how to teach.
- Some faculty are not comfortable asking questions of peers, as there is fear that this would put them at a disadvantage during the promotion and tenure process.

- Sessional and contract lecturers tend to be forgotten, and thus more institutional support is required for them in particular.

Role of Teaching and Learning Centres in Universities

- Play a central role in providing a venue for workshops and discussions.
- Enhance teaching within the academy.
- Provide courses critical for new faculty.
- Encourage faculty to engage in reflective practice and take a scholarly approach to teaching.

V. Results: Online Survey

The online survey was divided into four parts. Part One examined demographics, Part Two asked general questions about teaching, Part Three asked questions related to teaching resources and Part Four examined faculty engagement in the Scholarship of Teaching and Learning (SoTL). For many sections of the survey, faculty members had the opportunity to respond to open-ended questions. Samplings of typical responses are shown below.

Part One: Demographics

The breakdown of faculty across the six universities is displayed in Table 2. Approximate response rates are presented in Table 3. The overall response rate was approximately 18 per cent for full-time faculty. The faculty were primarily full-time (86 per cent), and the remainder were mostly part-time. In the "other" category were full-time faculty with limited duties or adjunct or sessional faculty. The distribution is displayed in Table 4.

Table 2. Institutional distribution of survey respondents (Question 1)

	Count	Percentage
Laurentian University	75	8.6
Lakehead University	107	12.2
Queen's University	152	17.4
Ryerson University	94	10.7
University of Guelph	191	21.8
The University of Western Ontario	256	29.2
Did not answer	1	.1
Total	876	100.0

Table 3. Response rate of full-time faculty at participating universities

	Full-time faculty	Survey respondents (full-time)	Response rates %
Laurentian University	410	61	14.9
Lakehead University	300	83	27.7
Queen's University	838	125	14.9
Ryerson University	744	91	12.2
University of Guelph	817	182	22.3
The University of Western Ontario	1,070	213	19.9
Total	4,179	755	18.0

Table 4. Distribution of respondents by employment status (Question 2)

	Count	Percentage
Full-time	755	86.2
Part-time	76	8.7
Other & no answer	45	5.1
Total	876	100.1

While efforts were made to solicit responses from full-time faculty only, in some cases the e-mail distribution list included some part-time faculty members. However, as so few (76) part-time faculty responded, it is evident that very few received the e-mail invitation. However, the researchers decided to include all responses to the survey in the analysis, to maximize the number of cases and to include representation from the small universities.

The academic ranks of the full-time respondents are given in Table 5. There was a relatively even distribution of different ranks: 34 per cent assistant professors, 38 per cent associate professors and 28 per cent full professors. This distribution closely corresponds to the actual distribution of ranks of full-time faculty at the six participating universities, which shows the representativeness of our sample.

Table 5. Distribution of full-time faculty by academic rank (Question 3)

	Survey respondents (%)	Actual distribution
Assistant professor	34.1	33.6
Associate professor	38.2	37.7
Full professor	27.7	28.7
Total	100.0	100.0

The responses to the question about the number of years the respondents had been teaching at their current institution are displayed in Table 6. Again, there was an even distribution, with about one-third in each category.

Table 6. Distribution of respondents by number of years at current institution (Question 5)

	Count	Percentage
0-5 years	326	37.2
6-15 years	285	32.5
16+ years	258	29.5
No answer	7	.8
Total	876	100.0

One common issue with survey research is bias associated with non-response or the "volunteer problem" – in that those who volunteer to complete the survey may be different from those who do not complete the survey, and this may limit the generality of the results of the study (Fowler, 2002; Rosnow & Rosenthal, 1970). It is not known to what degree respondents "self-selected" for the survey or what factors may have contributed primarily to non-response. The fact that the survey was conducted in the summer, survey fatigue or e-mail overload may have contributed to fewer faculty opening the survey invitation e-mail. One way we tried to overcome this limitation was to give all members of the population we examined an opportunity to participate in the study, rather than focusing on a smaller sample. In addition, some studies have shown that a low response rate does not necessarily indicate that the responses are not representative (Fowler, 2002). Though our analysis of academic ranks (Table 5) indicates that the survey respondents corresponded to the actual faculty population, we cannot know if the faculty that responded to the survey are fully representative of either the 6 universities that participated in this study or of all 19 Ontario universities.

In order to verify the results of our study, we would need to replicate the study in the future. Also, in future studies it may be possible to examine the curriculum vitae of faculty members to determine whether they are in fact disseminating their research on the scholarship of teaching. We might also examine their actual teaching behaviour in the classroom. However, these interventions were beyond the scope of the current study. This is the first study that has focused on ways in which faculty learn how to teach in Ontario, and given the breadth of our investigation (involving six universities), the researchers believe it makes an important contribution to the literature on faculty engagement.

Part Two: General Questions about Teaching

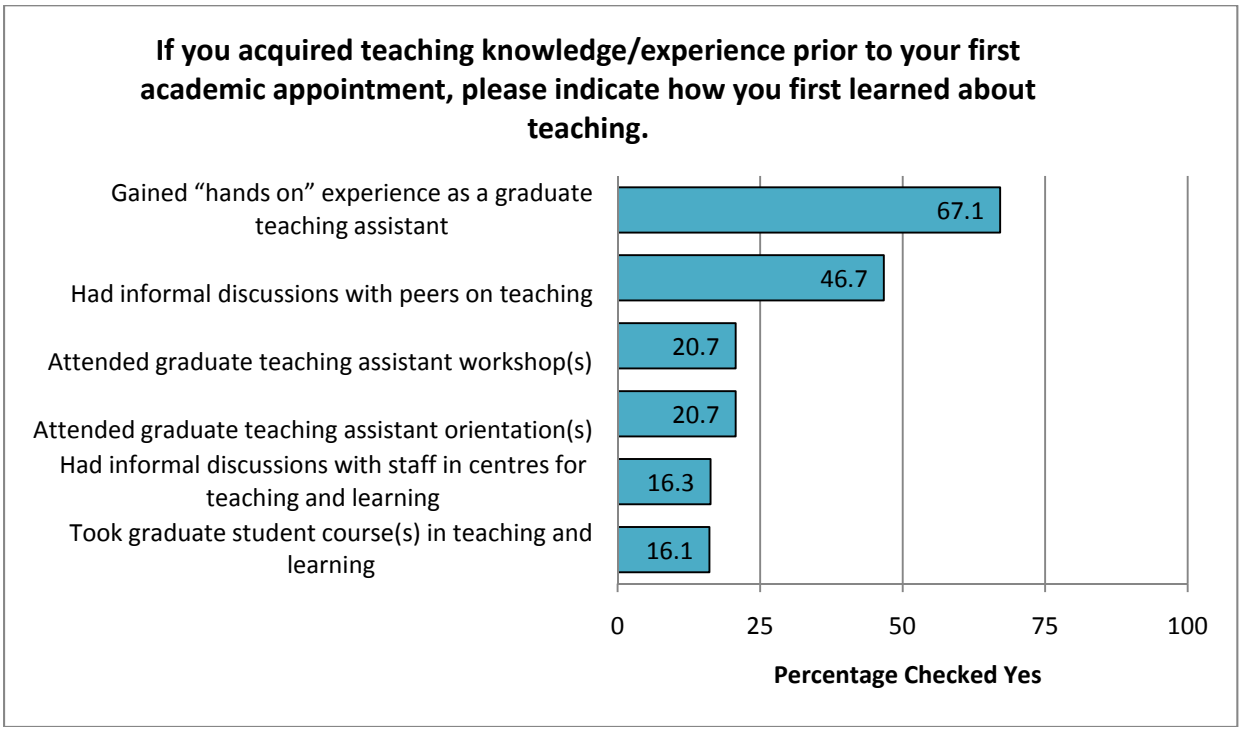
This section covered teaching issues prior to the first academic appointment (Figure 1), at the beginning of the respondents' careers (Figure 2) and at present (Figure 3). Resources or supports faculty wished were available when they started teaching (Figure 4) are also

reported. These questions all had multiple responses – that is, participants were asked to check all that applied.

The results displayed in Figure 1 show that prior to their first academic appointment, 67 per cent of the respondents gained “hands-on” experience as a graduate teaching assistant. This experience could include grading assignments, conducting seminars and/or conducting lectures and/or conducting labs.

The next highest percentage is “informal discussions with peers on teaching,” which 47 per cent of respondents checked. Twenty-one per cent attended graduate teaching assistant orientations or workshops, while 16 per cent had informal discussions with staff in centres or took a course on teaching and learning.

Figure1. How faculty first learned to teach if they acquired teaching knowledge/experience prior to their first academic appointment



A selection of responses to the “other, please specify” category provided further insights and richness, with some faculty indicating prior experience as educators; supply teaching in high school or summer school; or teaching at a community college. Some also mentioned exposure to academic settings where they had attended a faculty teaching workshop, garnered a teaching fellowship as a PhD student, taught as a postdoctoral fellow, been a part-time course instructor or gained experience through clinical teaching of

medical students. Others mentioned experience outside academia by offering private music lessons or tutoring.

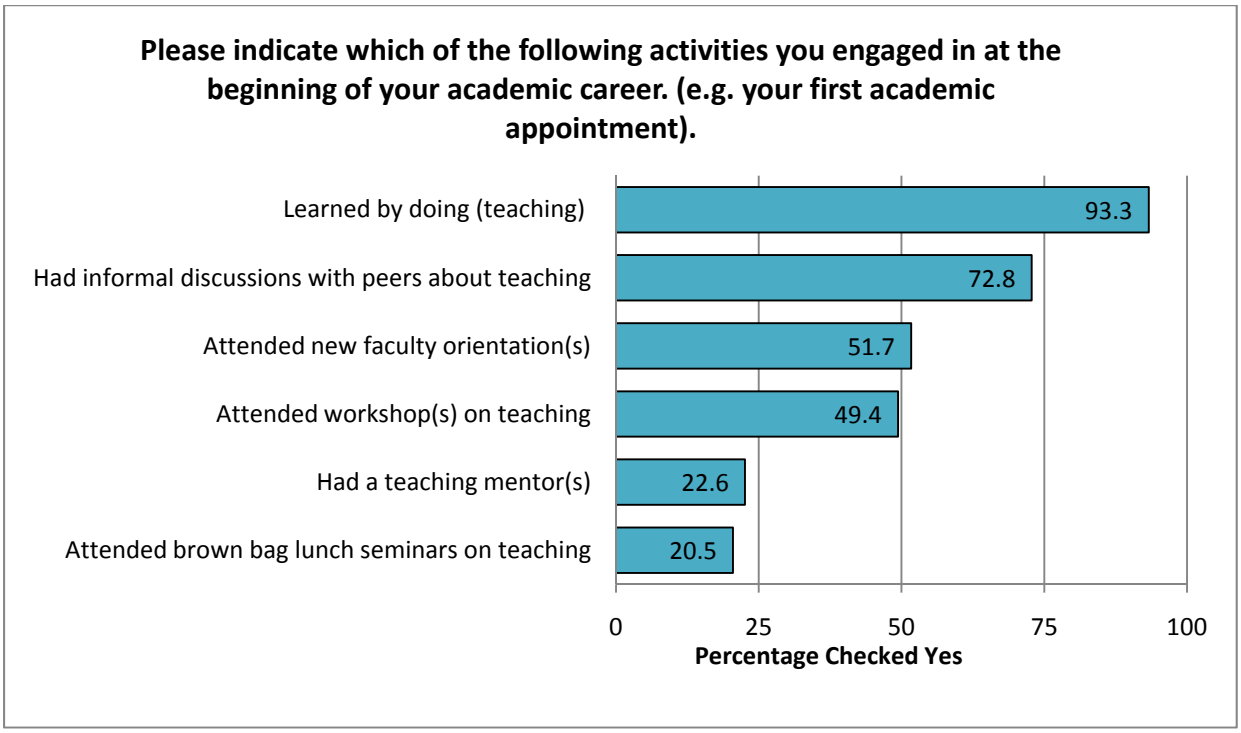
Although many had some teaching knowledge or experience prior to their first academic appointment, 30 per cent had no knowledge, and many expressed frustration because of this:

> There appears to be an assumption in [my] discipline that if you have an MA or PhD you can teach. When I started with the department there was no introduction regarding expectations of what or how to cover the subject matter in class. There was no guidance on grading or assessment practices or standards. All I could do was informally ask my peers or mimic their practices. Everything seemed to be summed up by the axiom of academic freedom. I could do what I wanted to as long as it did not violate academic regulations. This left me with no other option but trial and error, which I feel was a disservice to my students. My department made no effort to ensure I had access to guidance before I started teaching.

Turning to Figure 2, which deals with the beginning of the respondents' careers, we note that "learned by doing" was the category with the highest response; almost all respondents checked this category (93 per cent). A typical comment was "teaching is very specific to individual style and topics. I learned by trial and error, reflecting on how good teachers and public speakers were doing, and by using feedback students provided on course evaluations."

The second-highest category, "had informal discussions with peers on teaching," was selected by 73 per cent of respondents. It is interesting that a fair number of respondents checked "attended new faculty orientation" (52 per cent) and "attended workshops on teaching" (49 per cent).Twenty-three per cent had a teaching mentor, while 21 per cent indicated that they had attended brown bag lunch seminars. Fifteen per cent had informal discussions with staff in teaching and learning centres, and 10 per cent visited centres (see Table 2 in Appendix C).

Figure 2. Faculty engagement in teaching development activities at the beginning of their career (first academic appointment)



A sampling of responses to the "other, please specify" category included mention of acquiring further credentials in education through the acquisition of a master's in education and continuing to educate oneself about teaching and learning by attending scientific conferences with great speakers. Others learned through consulting books on aspects of teaching and learning or by reading the department training manual, as well as reading *Tomorrow's Professor* and course evaluations. Also of note were interactions with peers or colleagues, such as having videos made of lectures, sitting in on classes of gifted teachers, participating in discussion groups, team teaching or visiting colleagues' lectures.

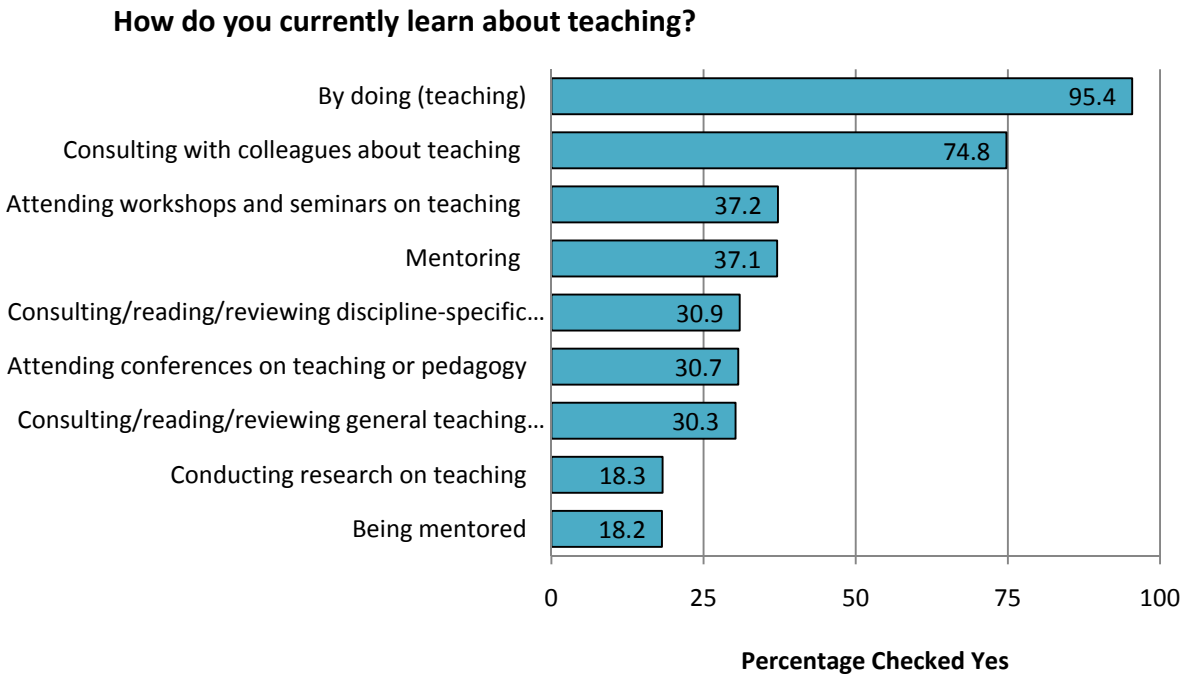
Figure 3 shows how faculty members currently learn about teaching. As might be expected, the category "by doing" was checked by almost all the respondents (95 per cent). "Consulting with colleagues about teaching" was checked by 75 per cent of the faculty.

"Mentoring" is currently being undertaken by 37 per cent of the sample (mainly the more senior faculty), while "being mentored" was cited by 18 per cent (mainly those earlier in their faculty careers). Like many focus group respondents, faculty strongly valued this activity:

> A friend taught me how to teach based on the principles of adult education. She mentored me as I applied it to my class setting and was available to answer my questions, and to help me incorporate the approach into my teaching. It's a learning process, but I learned the value of structure and preparation. I also have felt a huge weight off of my shoulders because I now know how to prepare, my class preparation is quick, easy and not as painful as it use [sic] to be. I am now a believer, but I honestly wasn't before. I think it takes more than just reading to be able to learn how to teach, it takes ongoing support, you need to see it in action, and learn to apply the techniques to your setting.

About a third of the respondents reported participating in each of the following activities: attend conferences on teaching (31 per cent), attend workshops or seminars (37 per cent), consult general teaching journals (30 per cent) and consult discipline-specific teaching journals (31 per cent).

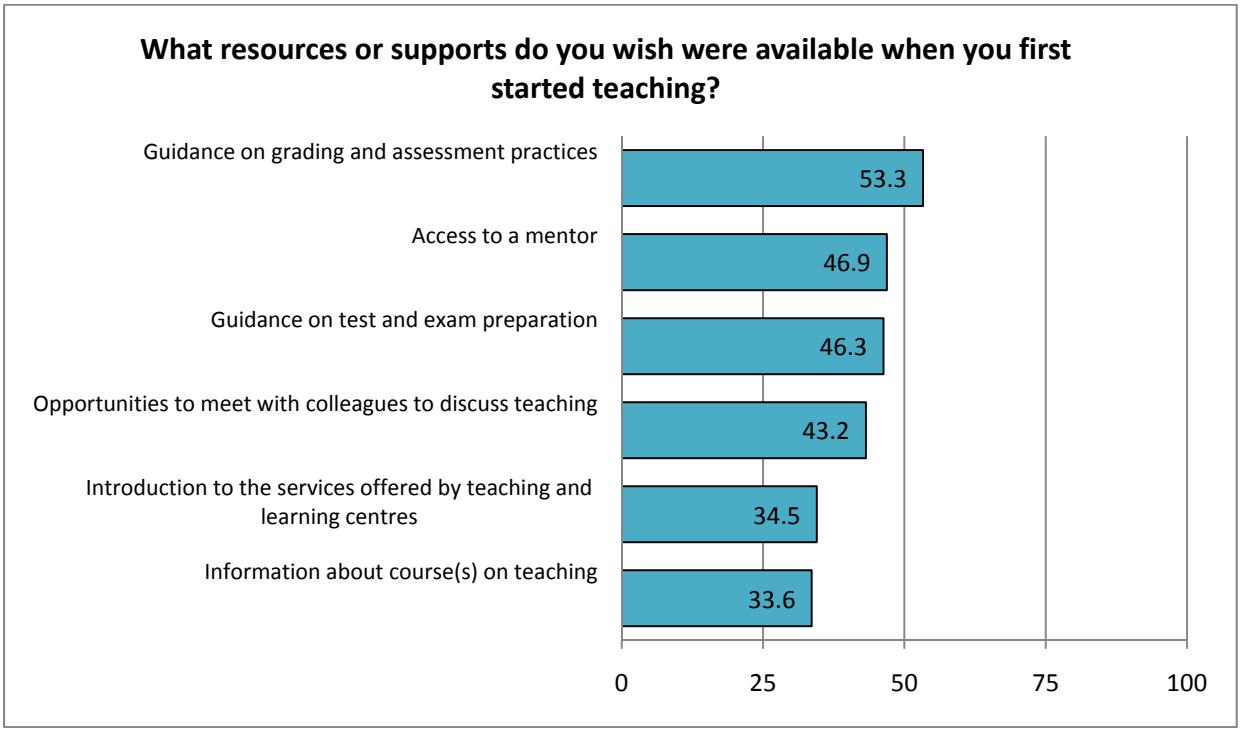
Figure 3. Faculty engagement in teaching development activities for current academic appointment



In the next question, faculty were asked what resources or supports they wished had been available when they first started teaching (Figure 4). Forty-seven per cent wished they had had access to a mentor, and 53 per cent wished they had had guidance on grading and assessment practices. Similarly, 46 per cent would have liked guidance on test and exam

preparation. Of interest is the finding that 43 per cent wished they had had opportunities to meet colleagues to discuss teaching.

Figure 4. Resources faculty wish had been available when they first started to teach



This section concluded with two questions regarding the importance of teaching. The question about the importance of teaching to the respondents' overall professional practice is presented in Table 7. Very high percentages (78 per cent) of respondents felt that teaching was very important to their overall professional practice.

Table 7. How important do you believe teaching is to your overall professional practice? (Question 5)

	Count	Percentage
Very important	681	78.2
Important	152	17.5
Somewhat important	32	3.7
Not very important	3	0.3
Not at all important	3	0.3
Total	871	100

Following is a comment that is typical of responses to this question:

> There were lots of resources available when I started teaching but I did not make use of any of them because it was clear that, while participating in these programs might improve my teaching, spending that time on my first NSERC application and on doing research would do *much* more for my career. If completing a teaching training course were a requirement in place of teaching a course in a professor's first year, university teaching would probably be a lot better.

As it relates to judging accomplishments, the scores relating to the perceived importance of teaching to the institution are lower, as can be seen in Table 8. Only 30 per cent believed that teaching was "very important," and another 32 per cent felt it was "important"; however, 26 per cent felt that it was only "somewhat important" and 10 per cent said that it was "not very important." The results are quite different from respondents' beliefs about the importance of teaching to their own overall professional practice (shown in Table 7).

Table 8. How important do you believe teaching is to your institution in judging your accomplishments? (e.g., annual reviews, promotion and tenure, merit awards) (Question 6)

	Count	Percentage
Very important	258	29.7
Important	277	31.8
Somewhat important	230	26.4
Not very important	83	9.5
Not at all important	22	2.5
Total	870	100

No significant variation was found among the faculty of the small, medium and large universities with regard to the importance they placed on teaching in the context of their overall professional practice or the importance they felt their institution placed on teaching in judging their accomplishments.

Part Three: Questions about Teaching Resources

The third section of the survey contained questions pertaining to resources available for teaching. The first question focused on how often respondents had accessed services at the centres for teaching and learning at their university. Table 9 indicates that of those who had used the centre, 78 per cent used it one to four times, and 22 per cent accessed services more than five times in the past year.

Table 9. How many times in the past year have you used the information/services/resources of the centre for teaching and learning at your university to help with your teaching? (Question 1)

	Count	Percentage
1-4 times	382	77.5
5-8 times	77	15.6
9-12 times	18	3.7
13-16 times	3	.6
More than 16 times	13	2.6
Total	493	100.0

[Does not include Laurentian University or Not Applicable responses]

Table 10 explores the overall satisfaction of respondents with the services of the teaching and learning centres. Eighty-five per cent were “very satisfied” or “satisfied” with the services received from the centres. One individual commented that their centre had “accessible advice tailored to my specific needs as well as general advice. I feel very comfortable in seeking advice and direction to resources from the staff.”

Table 10. How satisfied were you with the information/ services/ resources you received from the staff at your teaching and learning centre? (Question 2)

	Count	Percentage
Very satisfied	215	40.1
Satisfied	241	45.0
Neither satisfied nor dissatisfied	58	10.8
Dissatisfied	18	3.4
Very dissatisfied	4	.7
Total	536	100.0

[Does not include Laurentian University or Not Applicable responses]

The next set of questions asked faculty to rate the importance of various types of assistance for services being offered by teaching and learning centres (see Table 11). In terms of solutions to a teaching problem or issue, 80 per cent felt that it was “very important” or “important” that centres offer support for this.

Table 11. How important is it for teaching and learning centres to . . .

	Very important %	Important %	Somewhat important %	Not very important %	Not at all important %	N
a) Offer solutions to a teaching problem or issue	45.0	34.6	14.5	3.2	2.7	780
b) Provide opportunities to make contact with peers/colleagues and engage in networking	32.1	37.4	20.1	7.4	3.1	783
c) Offer support for promotion and tenure process	33.6	29.1	22.4	8.9	5.9	776
d) Offer support for personal professional development goals (including time management, work/life balance, etc.)	21.5	30.6	26.9	15.6	5.5	778
e) Offer support for research on teaching	25.3	33.5	26.3	10.3	4.6	779

[Does not include Laurentian University]

Thirty-two per cent of the respondents felt that making contact and networking with peers or colleagues was a “very important” activity of centres, and an additional 37 per cent felt that it was “important.” In terms of offering support for the promotion and tenure process, 63 per cent felt that it was “very important” or “important.” Just over one-half of the respondents felt that it was “very important” or “important” that centres offer support for personal professional development goals. Offering solutions to teaching problems or issues was rated the highest in terms of importance within this set of questions. A major finding was that 59 per cent felt that centres should offer support for research on teaching. This is one of the elements of the Scholarship of Teaching and Learning (SoTL).

The next set of questions dealt with how often respondents participated in various activities. Table 12 shows whether respondents attended workshops, seminars or

discussion groups about teaching and learning. The “modal category” was once a year (33 per cent), while twice a year was the second-highest category (28 per cent).

Table 12. How often faculty participate in various teaching development activities

	Weekly %	Monthly %	Twice a year %	Once a year %	Never %	Other %	N
a. Attend workshops/seminars/interest groups/discussion groups about teaching and learning	0.7	7.8	27.5	32.6	19.2	12.3	856
b. Use the services of your teaching and learning/instructional development centre to learn about different teaching practices using new technology [*Laurentian data removed]	0.6	2.8	17.7	32.7	37.9	8.2	776
c. Use critical self-reflection to investigate a teaching issue or problem	33.0	27.9	14.3	7.8	8.6	8.4	942
d. Discuss teaching and learning with faculty colleagues	30.2	43.3	12.3	5	3.8	5.4	853
e. Discuss teaching and learning with faculty mentors	5.5	14.3	12.7	8.9	52	6.6	834

Table 12 also indicates how often respondents took advantages of the centres to learn about teaching practices using new technologies. Thirty-three per cent of the respondents chose once a year, while a larger proportion (38 per cent) never used the centres for this activity.

The next question dealt with using critical self-reflection to investigate a teaching issue or problem (Table 12). The “modal category” for this question was weekly (33 per cent) and the second-highest category was “monthly” (28 per cent), while 9 per cent were in the “never” category.

Respondents tended to discuss teaching and learning with their colleagues on a weekly (30 per cent) or monthly (43 per cent) basis. Meanwhile, discussions with faculty mentors occurred less often due, in large part, to the fact that many respondents did not have mentors. Fifty-two per cent of the respondents said that they never discussed teaching and learning with mentors, while only 14 per cent discussed issues monthly with mentors.

Table 13. What type of session on teaching and learning would you prefer to attend? (Question 5)

	Count	Percentage
A seminar 2 hours or less	483	56.8
A workshop more than 2 hours	189	22.2
Neither	106	12.5
Other (please specify)	73	8.6
Total	851	100

When asked what type of session they would prefer, 57 per cent of faculty checked “a seminar” – clearly a majority (Table 13). Twenty-two per cent chose “a workshop,” and 13 per cent wanted neither type.

The next two questions dealt with how respondents felt about their university and their unit supporting their growth as a teacher (Table 14). Forty-six per cent felt that the university “strongly supports” or “supports” their growth, while 8 per cent felt that the university did not support their growth and 12 per cent felt that the unit did not support their growth.

Table 14. The extent to which university or unit/department supports faculty growth as teachers

	Strongly supports %	Supports %	Supports somewhat %	Supports a little %	Does not support %	N
a) To what extent do you feel the university supports your growth as a teacher?	12.3	33.7	27.8	18.7	7.5	855
b) To what extent do you feel your faculty/department/unit/school structure supports your growth as a teacher?	10.1	34.8	27.4	15.8	11.9	859

Interestingly, of the 46 per cent of faculty who responded that their university “strongly supports” or “supports” their growth as teachers, a larger percentage of faculty who selected this category were from the middle-sized universities.

Of the 35 per cent of faculty who indicated that they felt their faculty, department, unit or school structure “supports” their growth as a teacher, a clear difference was indicated by those from the middle-sized universities, while little difference was found among the types of universities for “strongly supports.”

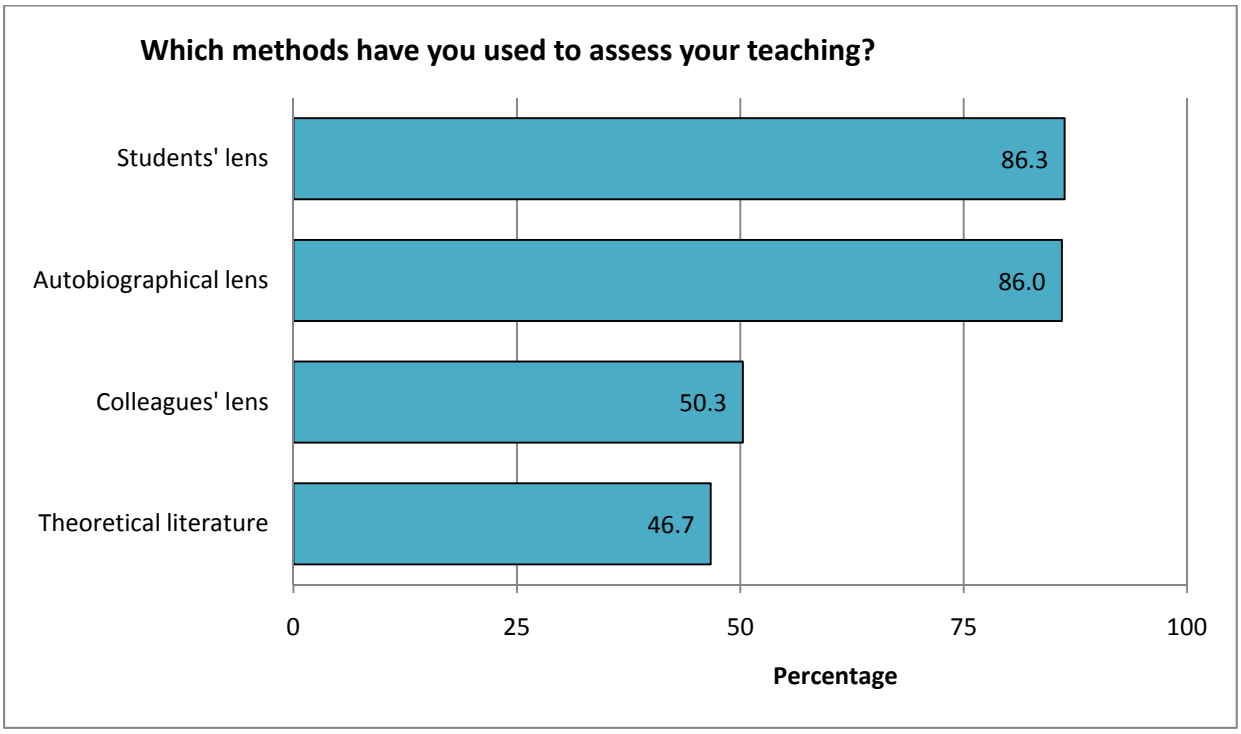
Part Four: Questions Related to the Scholarship of Teaching and Learning (SoTL)

Part Four of the survey examined faculty engagement within the context of the Scholarship of Teaching and Learning (SoTL), drawing upon the framework of understanding as outlined by the five grounded theoretical models presented in the literature review. (For a detailed description of these five models, see Section A. Phase 1: Review of Literature – under Section III. Methods). The models included the theories of Akerlind (2007), Brookfield (1995), Kreber & Cranton (2000), Theall & Centra (2001), Trigwell, Martin, Benjamin, & Prosser (2000) and Weston & McAlpine (2001). They provided the context and theoretical underpinnings for the questions described below. (For a number of questions within this section of the survey, faculty were asked to read and respond to several statements.) The first question asked faculty to read and respond to the following:

> In the book, *Becoming a Critically Reflective Teacher* (1995), Brookfield suggests there are four self-reflective lenses through which we can view ourselves as teachers and that these lenses can influence our development as teachers. They are as follows: (1) autobiographical: through our own experiences as teachers and learners; (2) students: through our students' experiences of us as teachers; (3) colleagues: through dialogue with our colleagues; and (4) theoretical: through theoretical and research-based literature. (Faculty Engagement in Teaching Development Activities, Online Survey Questionnaire, Part Four, Question 1, June 2009).

Faculty were then asked to respond to the following multiple response question: "Regardless of whether or not you are familiar with Brookfield's theory, please indicate below which methods you have used for assessing your teaching. Please check all that apply." Responses to this question are shown on Figure 5.

Figure 5. Methods to assess teaching



Approximately 86 per cent of respondents indicated that they had used both the autobiographical lens and students' lens for assessing their teaching. Half of the respondents (50 per cent) had used Brookfield's colleagues' lens, and 47 per cent had used theoretical literature for assessing their teaching.

The next question introduced Akerlind's (2007) progression of faculty engagement within a hierarchy, explaining how faculty develop an understanding of teaching and learning over time. Faculty were given the following description to read:

> In the article, "Constraints on academics' potential for developing as a teacher" *Studies in Higher Education* (2007), Akerlind suggests that faculty development for teachers follows a continuum. This continuum moves from a teacher-centred approach (where the teacher engages the student) to a student-centred approach (where the focus is on student's learning, development, and conceptual understanding) and ultimately, to a learner-centred approach (which goes a step beyond student-centred towards the student being actively engaged in the learning process). (Faculty Engagement in Teaching Development Activities, Online Survey Questionnaire, Part Four, Question 3, June 2009).

Faculty were then asked to respond to the following question: “Given this description, where do you locate your teaching along this continuum?” (Table 15).

Table 15. Where do you locate your teaching along this continuum? (Question 3)

	Count	Percentage
Closer to a teacher-centred approach	136	15.9
Closer to a student-centred approach	284	33.2
Closer to a learner-centred approach	296	34.6
This continuum does not apply very well to my own faculty development	74	8.7
Other	65	7.6
Total	855	100

There is a very small difference between those respondents who indicated they were closer to a learner-centred approach (35 per cent) in comparison with those who indicated they were closer to a student-centred approach (33 per cent). Only 16 per cent of respondents indicated their teaching was closer to a teacher-centred approach, while 9 per cent indicated that the continuum did not apply to their own development as teachers.

Respondents gave a variety of other answers, some of which have been included here. One faculty member felt that all of these approaches merge and balance, depending on the situation; another felt that the approach taken depended upon the class size; still others felt that approach depended on student academic level or the class. Some felt that some of each of the elements of the teacher- and student-centred approaches were used, and others indicated that they used all three but in different courses. Several faculty members expressed the idea that the ideal was the learner-centred approach but felt it was easier to take this approach in small classes and very difficult in larger classes. Still others mentioned that the approach used would depend upon the course taught and its level.

The next two questions looked at the differences between faculty members who believed they were involved in scholarly teaching and those who believed they were engaged in the practice of the Scholarship of Teaching and Learning (SoTL). A continuum occurs between scholarly teaching and SoTL (McKinney, 2004; Taylor & Dawson, 2006; Weimer, 2006). Scholarly teaching requires faculty to incorporate the pedagogical literature into their teaching and engage in reflective practice about their own teaching. SoTL takes this process of reflection further by requiring that research performed to evaluate teaching is subject to the same review process as discipline-specific research (Dawson, 2006). SoTL is often viewed as the nexus between scholarly teaching, disciplinary research and educational research (Taylor & Dawson, 2006).

Faculty were given the following description to read: “Scholarly teaching has been described as the practice of engaging in reflection on teaching and consulting the literature about what works in order to find ways to improve one’s own teaching.” They were then asked to assess themselves as to how often they engaged in the activity of “scholarly teaching” (Table 16).

Table 16. Faculty engagement in scholarly teaching and SoTL

	Very often %	Often %	Sometimes %	Rarely %	Never %	N
a) How often do you feel you engage in the practice of scholarly teaching?	12.7	21	34.4	24.7	7.2	863
b) How often would you say that you engage in the Scholarship of Teaching and Learning (SoTL)?	11	17.5	30.6	28.8	12.1	857

We note that “sometimes” was the category with the highest response (34 per cent), followed by “rarely” at 25 per cent. A fair number of respondents (21 per cent) indicated that they “often” engaged in scholarly teaching, with only 13 per cent selecting “very often,” as shown in Table 16(a).

The next question introduced the Scholarship of Teaching and Learning (SoTL), and faculty were asked to read the following statement:

> The Scholarship of Teaching and Learning (SoTL) has been described as development of scholarly knowledge [about teaching] through reflection, conducting research and sharing expertise; not only in order to improve practice within one’s own classroom but also beyond, to the institution and the field. (Faculty Engagement in Teaching Development Activities, Online Survey Questionnaire, Part Four, Question 5, June 2009).

Faculty were then asked to indicate to what extent they felt they were engaged in the practice of the Scholarship of Teaching and Learning.

About 11 per cent of the respondents felt that they engaged in the practice of SoTL “very often,” and 18 per cent indicated ‘often” (see Table 16(b)). Less than one-third of the respondents (31 per cent) indicated that they “sometimes” engaged in SoTL, with 29 per cent indicating that they “rarely” did. Twelve per cent said that they had “never” engaged in

SoTL. This indicates that many faculty place value on participating in SoTL. As one respondent stated,

> More importance should be given to attending conferences about teaching at the university level and to engaging in research about teaching practices (rather than emphasis being placed only on attending and presenting research findings at discipline specific conferences).

Table 17. How often faculty read general or discipline-specific literature on teaching

	Very often %	Often %	Sometimes %	Rarely %	Never %	N
a) How often do you read general literature on teaching (for example: journals, newsletters, scholarly research, books, websites . . .)?	7.7	14.3	34.9	30.4	12.7	868
b) How often do you read literature about teaching and learning specific to your discipline?	9.4	16.4	37.2	25.9	11.1	864

In examining Table 17, we can see that 14 per cent ‘often” read general literature about teaching and 16 per cent “often” read literature about teaching and learning specific to their discipline. Thirty-five per cent “sometimes” read general literature on teaching, and 37 per cent “sometimes” read literature about teaching and learning specific to their discipline. Thirty per cent indicated that they “rarely” read general literature about teaching and learning, and 26 per cent indicated that they “rarely” read literature about teaching and learning specific to their own discipline. Thirteen per cent “never” read literature of a general nature about teaching and learning, and 11 per cent “never” read literature about teaching and learning specific to their own discipline.

The next question asked faculty to indicate how often they discussed their teaching with their colleagues (Table 18).

Table 18. How often faculty discuss teaching with colleagues (Question 9)

	Very often %	Often %	Sometimes %	Rarely %	Never %	N
How often do you discuss teaching with your colleagues?	18.1	35.4	36.1	9.1	1.3	864

The highest percentage of respondents (36 per cent) indicated that they “sometimes” discussed teaching with their colleagues, closely followed by those indicating that they “often” did this (35 per cent). Those indicating that discussions with colleagues took place “very often” comprised 18 per center of respondents, and only 9 per cent indicated that they “rarely” discussed teaching with their colleagues.

In the next question, faculty were asked to indicate how much time they spent engaged in teaching activities related to preparation (Table 19).

Table 19. How much time (on average) do you spend preparing lectures, labs, lessons and other activities per course each week? (Question 10)

	Count	Percentage
Less than 2 hours	46	5.3
2 hours up to 4	164	19.0
4 hours up to 6	212	24.6
6 hours up to 8	177	20.5
More than 8 hours	211	24.5
Other	52	6.0
Total	862	100.0

Nineteen per cent of respondents indicated that they spent 2 hours up to 4 hours per week preparing teaching materials, while nearly 25 per cent spent 4 hours up to 6 hours. Twenty-one per cent spent 6 hours up to 8 hours, and 25 per cent spent more than 8 hours, with only 5 per cent indicating that they spent less than 2 hours preparing for courses in a week.

Table 20. Do you practice self-assessment of your teaching? (Question 11)

	Count	Percentage
Yes	747	87.4
No	108	12.6
Total	855	100.0

Eighty-seven per cent of respondents indicated that they practised self-assessment (as shown in Table 20). According to Brookfield, this autobiographical lens is useful if faculty members are to become critically reflective teachers. However, using only this lens may prevent us from discovering some of our lesser-known shortcomings and prohibit us from improving our understanding of teaching and learning – because as teachers, we are influenced by our own assumptions and beliefs (Brookfield, 1995).

Table 21. Do you ever invite peers to provide feedback on your teaching? (Question 12)

	Count	Percentage
Yes	355	41.3
No	504	58.7
Total	859	100.0

Forty-one per cent of respondents indicated that they have invited peers to provide feedback on their teaching (Table 21). In addition to practising self-assessment (the autobiographical lens), Brookfield (1995) suggests that the colleague lens is useful in helping to uncover those behaviours that are hidden from our view and may escape the autobiographical lens.

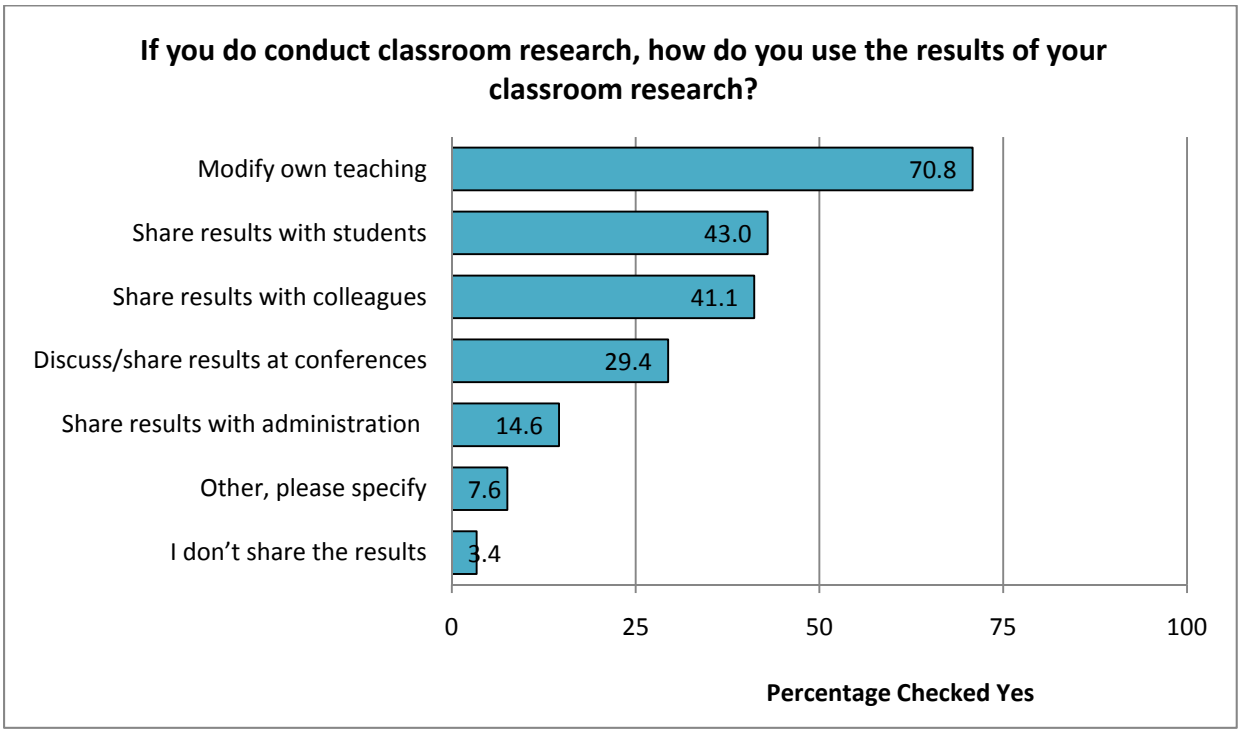
Table 22. Have you ever been asked to visit colleagues' classes to provide feedback? (Question 13)

	Count	Percentage
Yes	280	32.4
No	585	67.6
Total	865	100.0

The question in Table 22 goes a step further in asking faculty if they have ever been invited to a colleague's class to provide feedback on their teaching in the classroom. A substantial number of respondents, 68 per cent, had never been invited, although almost one-third (32 per cent) indicated that they had had occasion to peer-review a colleague in their teaching practice.

In the next question, which introduced classroom research (Figure 6), faculty were asked, "If you do conduct classroom research, how do you use the results of your classroom research?" (Question 14).

Figure 6. Use of classroom research results by faculty



Of those respondents who indicated that they conducted classroom research, 71 per cent reported using the results of their research to modify their own teaching, with 43 per cent indicating that they shared the results with students and 41 per cent reporting having shared results with colleagues. Twenty-nine per cent noted that they had shared results at conferences.

The beliefs of faculty regarding the research and teaching nexus were explored with the next question (shown in Table 23).

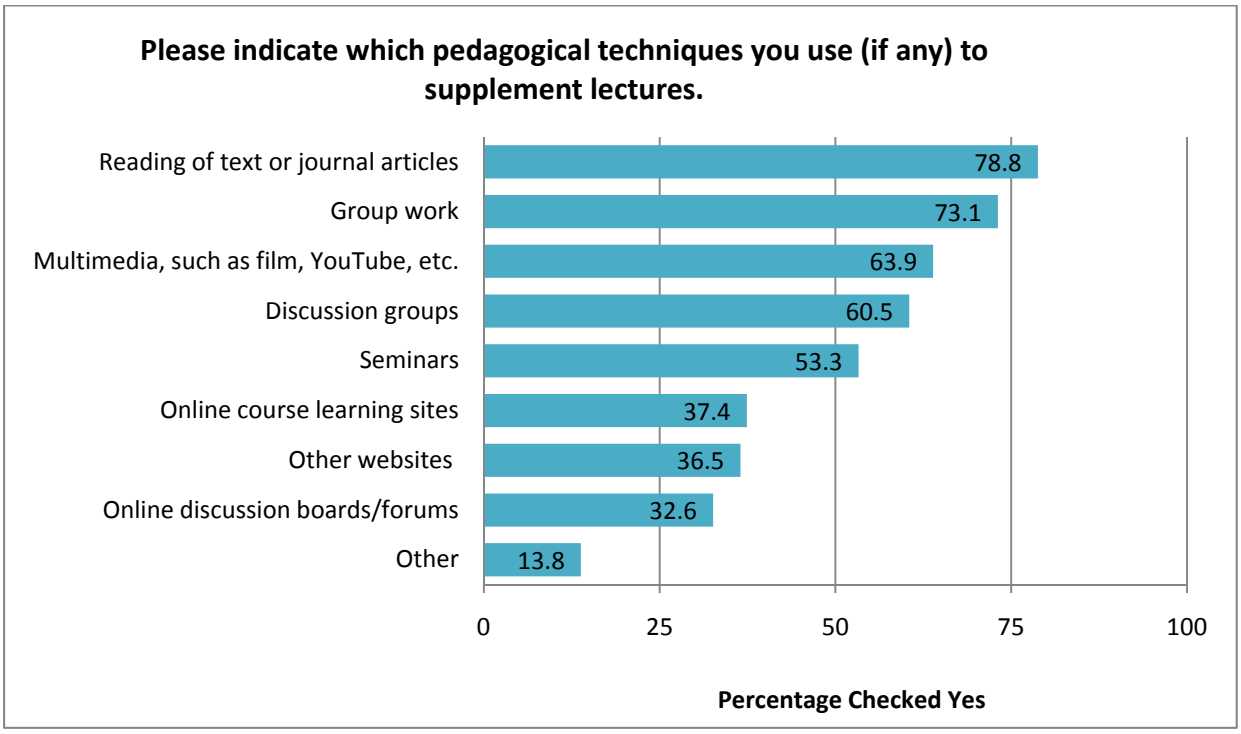
Table 23. Read the following statement:
"Research, not teaching, pays off in enhanced reputation, respect of peers and access to funds." (Question 15)

	Strongly agree %	Agree %	Neither agree nor disagree %	Disagree %	Strongly disagree %	Other %	N
To what extent do you agree or disagree?	39.3	34.6	9.6	6.8	3.7	6.1	858

The majority of respondents indicated that they either strongly agreed (39 per cent) or agreed (35 per cent) with the statement. Seven per cent indicated that they disagreed with the statement, and only 4 per cent selected "strongly disagree." Responses to "Other, please specify" included agreement with the statement because faculty felt it was true in terms of expectations but wished the situation was different. These "Other" responses also indicated that the statement definitely applied more in the context of access to funds, with research overwhelming the teaching mission of the university. Other respondents within the "Other" group stated that they felt both teaching and research could create an enhanced reputation and that they are not mutually exclusive, as research can lead to better teaching. A few of the "Other" respondents were in agreement with the statement mentioning that the importance of research or teaching depends on the type of institution in which the faculty member teaches and their particular role in their department.

Faculty were then asked to indicate the types of teaching activities they used in the classroom in addition to lectures (Figure 7).

Figure 7. Types of teaching activities used in addition to lectures



The highest percentage of respondents (79 per cent) indicated that they assigned readings of text or journal articles to supplement lectures, and 73 per cent reported that they used group work. Sixty-four per cent of respondents said that they used multimedia, 61 per cent indicated that they used discussion groups, and 53 per cent used seminars. Course-related websites were used by 37 per cent of the respondents to supplement lectures, and 37 per cent indicated that they used websites other than those specific to the course. Thirty-three per cent made use of online discussion boards or forums.

Some of the responses to “Other, please specify” included a range of pedagogical techniques such as:

- case studies and community projects; problem-based learning and collaborative projects and other experiential activities and hands-on opportunities
- computer labs and computer simulations
- guest lectures and real patients or their stories
- exercises and assignments, dyads in class and extensive critical writing
- lab and field work, site visits, field trips and museum and gallery visits
- peer instruction and peer review and a lot of in-class discussion
- role play and simulations
- using WebCT, online quizzes or seminars, podcasts, blogs or Wiki created for course and interactive clickers (iClicker)

The next question introduced the concept of a student's learning style. Faculty were given the following description to read:

> A student's learning style/preference can be thought of as "how" a student learns as opposed to "what" a student learns. Furthermore, a student's learning style/preference can influence a student's way of responding to and using stimuli in the context of learning (Faculty Engagement in Teaching Development Activities, Online Survey Questionnaire, Part Four, Question 17, June 2009).

Faculty were then asked to respond to the following questions regarding their learning styles and preferences (Table 24).

Table 24. Do you consider different learning styles/preferences when designing the following?

	Yes %	No %	N
a) Instruction in general	85.3	14.7	853
b) Specific learning activities	81.7	18.3	838
c) Exams	53.9	46.4	826
d) Assignments	72.7	27.3	844

A large percentage (85 per cent) of faculty indicated that they took learning styles into consideration for instruction in general, with 82 per cent considering learning styles when designing specific learning activities and 54 per cent taking learning styles into account for exams. Seventy-three per cent of the respondents considered learning styles when designing assignments.

In the next question, faculty were asked to read the following statement: "Active learning is reported to occur when students engage in an activity that provides an opportunity for them to think about, reflect and comment on the information presented" (Faculty Engagement in Teaching Development Activities, Online Survey Questionnaire, Part Four, Question 18, June 2009). Faculty were then asked to answer the following question related to active learning: How often do you design courses that include active learning? (Question 18).

Table 25. How often do you design courses that include active learning? (Question 18)

	Always %	Very often %	Often %	Sometimes %	Rarely %	Never %	N
How often do you design courses that include active learning?	40.3	25.5	18.3	12.5	2.7	0.7	863

The highest percentage of respondents (40 per cent) reported “always” designing courses with active learning in mind, followed by 26 per cent, who indicated that they did this “very often” and 18 per cent reporting “often.” Thirteen per cent of respondents “sometimes” designed courses including active learning. Very few indicated “rarely” (3 per cent) or “never” (<1 per cent).

Although many faculty engage in active learning activities, the lecture is still often used in university courses. One respondent commented as follows:

> Teaching at the university level could use a "thinking switch" to understanding how adults learn. There are still far too many lectures/stand alone teaching. Our classrooms need to become learning spaces, using newer learning technologies, assessment that includes media/presentations/written papers from our students and harnessing a new approach to knowledge building and creative thinking. Included in a changing learning environment is the need to have our meeting/classroom spaces more user friendly to dialog, small groups, building new ideas from conversations where adult learners can move around, create models, give presentations, as well as, become part of the builders of knowledge and understanding of the subject matter with the guidance of the Professor.

The next question asked faculty to indicate how often they tried new ways of teaching content when designing their courses (Table 26).

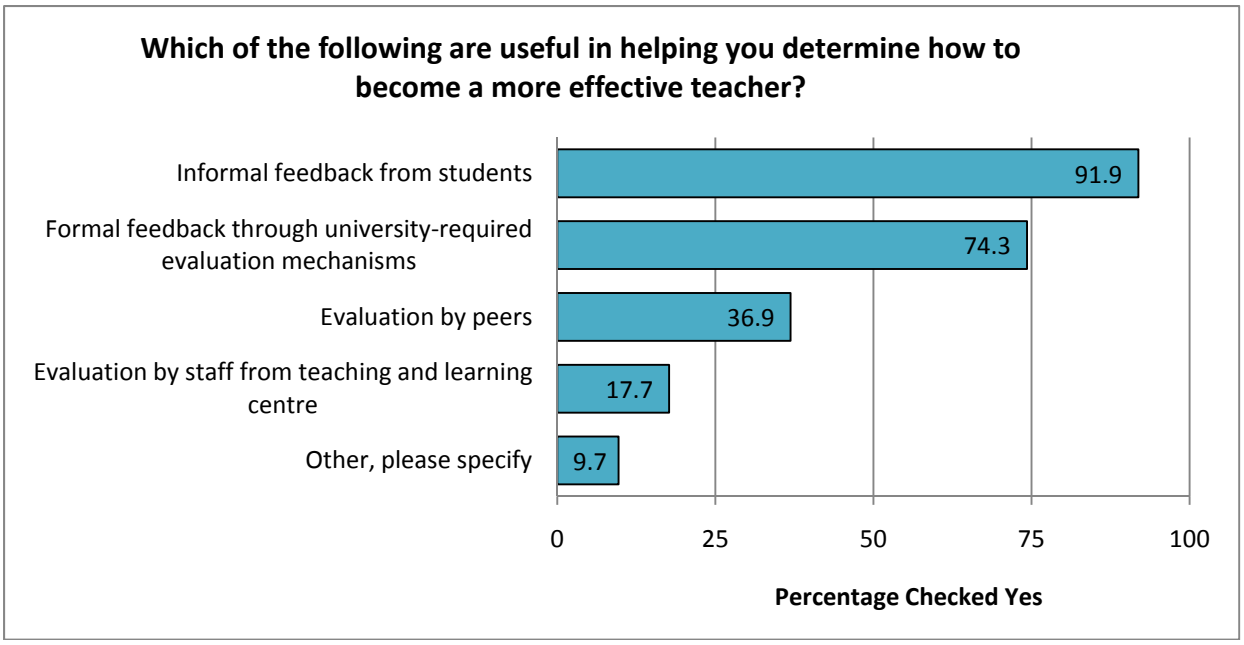
Table 26. How often do you design courses that include new ways of teaching content in your discipline? (Question 19)

	Always %	Very often %	Often %	Sometimes %	Rarely %	Never %	N
How often do you design courses that include new ways of teaching content in your discipline?	12.3	24.3	22.5	28.2	10.4	2.3	856

The responses to this question were fairly evenly spread out for several of the options, with 28 per cent indicating “sometimes,” 24 per cent “very often” and 23 per cent “often.” Twelve per cent reported “always” designing courses with new ways of teaching content and 10 per cent of the respondents said they did this “rarely.”

In the next question, faculty were asked to indicate what teaching activities they felt helped them become more effective teachers (Figure 8).

Figure 8. Which of the following are useful in helping you determine how to become a more effective teacher? (Question 20)



Informal feedback from students was the category with the highest response rate, with almost all respondents checking this category (92 per cent). The second-highest category was formal feedback through university-required evaluations, at 74 per cent. Evaluation by peers followed, at 37 per cent. It is important to note that evaluation by staff from teaching and learning centres was low, at 18 per cent.

Responses to “Other, please specify” included the following: critical self-reflection and evaluation (faculty members’ own assessments of what worked and didn’t work) or trial and error results of new approaches; brainstorming and discussion with peers or consultation with departmental colleagues and peers at other universities; feedback from recent graduates and those who had graduated more than five years earlier, in addition to formal student evaluations; feedback and evaluation from teaching assistants; seminars and workshops provided by teaching and learning centres; and consulting the literature.

The next three questions pertain to the purposes and goals of a program or course. Faculty were asked to provide responses regarding curricular changes and impacts on students’ learning.

Table 27. Have the programs offered by your department undergone any recent curricular changes? (within the past 5 years) (Question 21)

	Count	Percentage
Yes	606	71.5
No	242	28.5
Total	848	100.0

The majority of respondents (72 per cent) indicated that their departments had undergone recent curricular changes (within five years) (as shown in Table 27).

Table 28. How recent were those changes? (Question 22)

	Within the past month	Within the last 6 months	Within the past year	More than a year ago	Other	N
How recent were those changes?	9.9%	25.2%	38.5%	18.5%	8.0%	616

The highest percentage of changes had occurred within the past year (39 per cent), followed by 25 per cent within the last six months and 19 per cent over a year ago (Table 28).

Table 29. In your opinion, do you think the changes will have a positive impact on influencing student learning outcomes? (Question 23)

	Count	Percentage
Yes	433	75.0
No	144	25.0
Total	577	100.0

Seventy-five per cent indicated that the recent curricular changes would have a positive influence on student learning outcomes (Table 29).

Table 30 shows how faculty responded when asked to locate themselves along a progression from a teacher-centred to a more student-centred approach. The closer the teacher moves to a learner-centred approach, the more the focus is on student learning and understanding. Faculty responses were viewed in relation to their rank.

Table 30. Faculty development along a continuum of teacher- to learner-centredness

	Assistant professor	Associate professor	Full professor	Other	Total
Teacher-centred	38 14.4%	49 17.7%	36 18.7%	10 9.6%	133 15.9%
Student-centred	92 35.0%	82 29.6%	54 28.0%	49 47.1%	277 33.1%
Learner-centred	89 33.8%	99 35.7%	67 34.7%	35 33.7%	290 34.6%
This continuum does not apply very well to my own faculty development	18 6.8%	26 9.4%	25 13.0%	3 2.9%	72 8.6%
Other	26 9.9%	21 7.6%	11 5.7%	7 6.7%	65 7.8%
Total	263 100%	277 100%	193 100%	104 100%	837 100%

Chi-square = 25.676 ($p < .01$)

Teacher-centredness, student-centredness and learner-centredness are broken down by academic ranking in Table 30. Smaller percentages of faculty located themselves closer to teacher-centred approaches, with 19 per cent full professors, followed by 18 per cent associate professors, 14 per cent assistant professors and 10 per cent of other instructors. Of those faculty who located themselves closer to a more student-centred approach, 35 per cent were assistant professors, followed by 30 per cent associate and 28 per cent full professors. Forty-seven per cent of other instructors indicated that they took a student-

centred approach to teaching. Finally, 36 per cent of associate professors indicated that their approach to teaching was closer to learner-centred, followed by 35 per cent full professors, 34 per cent assistant professors and 34 per cent other instructors.

Table 31 reveals faculty responses to peer feedback on their teaching, cross-tabulated by academic rank (Part Four, Question 12, by Part One, Question 3).

Table 31. Do you ever invite your peers to provide feedback on your teaching? (cross-tabulated by academic rank) (Part Four, Question 12 by Part One, Question 3)

	Assistant professor	Associate professor	Full professor	Other	Total
Yes	123 46.6%	118 42.3%	61 31.1%	45 44.1%	347 41.3%
No	141 53.4%	161 57.7%	135 68.9%	57 55.9%	494 58.7%
Total	264 100%	279 100%	196 100%	102 100%	841 100%

Chi-square = 11.873 ($p < .01$)

Table 31 shows that 41 per cent of faculty do invite peer feedback on their teaching. Of the respondents indicating that they invite peer feedback, the highest percentage of responses (47 per cent) was from assistant professors, followed by associate professors (42 per cent), with full professors being 31 per cent. Overall, the answers to this question indicated that assistant professors invited feedback on their teaching more than did their colleagues with associate or full professor rank. Of faculty members responding as “Other” (part-time, sessional or contract terms, etc.), 44 per cent indicated that they do invite feedback.

The importance of centres for teaching and learning offering support for research on teaching is cross-tabulated by academic rank in Table 32. Twenty-nine per cent of assistant professors and 34 per cent of other instructors indicated that this was “very important,” while over 30 per cent of associate and full professors indicated that they felt it was “important.”

Table 32. How important is it that the centre for teaching and learning offer support for research on teaching? (cross-tabulated by academic rank) (Part Three, Question 3(e) by Part One, Question 3)

	Assistant professor %	Associate professor %	Full professor %	Other %	Total
Very important	67 28.9%	59 23.2%	36 18.9%	30 34.1%	192 25.1%
Important	66 28.4%	93 36.6%	65 34.2%	33 37.5%	257 33.6%
Somewhat important	62 26.7%	74 29.1%	50 26.3%	18 20.5%	204 26.7%
Not very important	27 11.6%	20 7.9%	27 14.2%	3 3.4%	77 10.1%
Not at all important	10 4.3%	8 3.1%	12 6.3%	4 4.5%	34 4.5%
Total	232 100%	254 100%	190 100%	88 100%	764 100%

[Laurentian removed]
Chi-square = 23.510 ($p < .05$)

Part Five: Open-Ended Questions

At the end of the online questionnaire, respondents were asked to share any comments or feedback regarding the survey or to share any final thoughts about teaching. A large number of respondents took the time to reply, offering their thoughts about the institutional context of teaching at their universities and the specific content of the survey, as well as reflections on teaching and student learning. Some representative comments are presented below. Comments have been lightly edited for clarity.

Balancing Teaching and Research

- Teaching is undervalued in the context of most universities. Research is more highly regarded, regardless of the significance of that research. Teaching workloads are minimal, which is reflective of the degree of importance placed on teaching.
- I wish I had the time to simply focus on my teaching; it is always a balancing act, and it seems impossible to do all 3 roles (research, administration, teaching) with intensity.
- I was keen to be a great teacher, but my enthusiasm has waned over the years due to ongoing stressors/pressures to maintain quality while keeping a research program going. Something had to give, and it was the ongoing innovation in teaching I gave up.

- Get rid of tenure. It rewards mediocrity and does not focus on students. Also stop making teachers who want to teach do research to keep their jobs. Teachers who want to teach should focus on being the best they can be and not worry about publish or perish.
- I believe that this study is extremely important. Obviously, a university must be research driven, but teaching needs to be given equal weight in terms of priority. Undergraduate students turned off by poor teaching are not going to be inspired.
- I think teaching is the most important thing we do here. I'll leave it at that.

Institutional Issues

- One of the largest obstacles to effective teaching is the loss of faculty and shift in workload onto existing faculty.
- The BEST thing you could do is encourage the administration to put money back into class size, offer meaningful recognition that faculty work hard and are doing very well (not just paying lip service to the idea) and cut class sizes.
- In our current budgetary situation, I think the university should explore offering courses that combine aspects of distance learning with aspects of on-campus learning.
- There is active discouragement of innovation in teaching at my university that is specifically geared to penalizing outstanding or original teachers who might show up the weaknesses of the university system or other professors who cannot or will not try to perform at a higher level. I have had to make a choice between feeling I do my best in the classroom, where my methods have been a roaring success but does not appeal to students trying to get by with the minimum of effort, and achieving promotion to full professor and merit pay. I have chosen to do my best.

Students

- I have seen a real change in students and teaching in the past 5-10 years, a general relaxing of standards of work expected. This upsets me and means students entering our program are not used to the amount of work and critical thinking and self-direction required.
- Students want electronic copies of everything presented in class or lab and do not want to work at finding information themselves. I call them lazy learners. Thus, I use the blackboard and force them to take notes, either on paper or on their computer.
- I find the arguments implicit here, that "student-centred" and even "learner-centred" teaching are the only approach that is proper, to be exceedingly unhelpful. Different students really do learn in different ways, and this kind of rhetoric does not acknowledge that some students really can learn from a lecture – and what's more, others need to learn how to learn from a lecture.
- On occasion I have found students very conservative – not willing to try new ways of learning – and advocacy from the student representatives to return to lecture format so they can have the comfort of doing what the instructor "wants" rather than learning. The intellectual engagement is often hard to assess and not all students wish to try it.

Teaching and Learning Centres

- New faculty members are too busy actually teaching and conducting research to be able to take advantage of teaching seminars/workshops that are offered during the fall and winter terms.
- I have really appreciated the courses/seminars/brown bags offered by the teaching and learning centre on campus. It is my view that every new professor at my faculty should take the week-long summer course on teaching at the university offered by the centre.
- We need more opportunities to share experience on teaching, learn from successful teachers, and learn about the value of teaching on our progression as scientists/researchers. There are many seminars, conferences and short courses but not quite enough and these courses are not coming to us. The courses should "come" to departments or colleges.
- Teaching and learning centers need to be able to help professors understand not only the technical aspects of new media, but also how students use these media for their learning processes.
- Much of the teaching workshops I have attended have been superficial and technical rational in nature and really serve as an introduction to small pieces of what we have to understand deeply because this is our field. It is not a criticism, just an observation. Too many people believe that teaching is something that you can learn in a workshop or with a few quick tools, and effective teaching, like any other profession, requires a much more substantial commitment than that.

Training and Mentoring

- I was just reflecting the other day how strange it was that my sister (who teaches kindergarten) has had years of formal training, whereas I (who teach 4th year undergrad and graduate courses) have had virtually no training in teaching.
- I think we need to keep working to improve the teaching quality in our universities. It is still a great paradox that our method of developing new entrants to our profession (mainly through PhD programs) has no requirement for ANY formal development as a teacher, even though that is one of our key work activities!
- Graduate program training and preparation should be a required component of all PhD programs and teaching skills should be considered an essential component and equivalent to research roles.
- I find that it is assumed that individuals with PhD's know how to teach, but that is a salacious [sic] argument. A PhD is no guarantee of any teaching competency whatsoever. Universities need to provide training, guidance, and mentorship to new professors if they expect to retain students and provide them with a quality education.

Critiques of the Survey

- While the speakers and resource offices have a good deal to offer, I think it "engages" best when you follow that classic "KISS" principle – and Keep It Simple. I'd just say that teaching is about learning, and effective teaching happens when the barriers between "teacher" and "students" are down and everyone is learning.

- These questions are not sufficiently nuanced – they do not take account of class size and course level. Clearly different strategies are employed and there is less room for innovation in some types of courses (large lectures) than others; there also needs to be consideration of the differences between disciplinary vs. interdisciplinary courses.
- A lot of theory on teaching is nonsense. This is seen in some of the rather silly questions here.
- Teaching fine arts (film) is a special case. It is all a lot more participatory and creative than most university courses. That has a huge impact on how I teach and how the students learn. I am not sure this is reflected well in these questions (or my answers to your questions).

General Positive

- Although this took precious time from my preparations for next week's new course, I was happy to give you some feedback. I am a teacher first and foremost and support any efforts to improve teaching standards.
- I have learned a lot about my own gaps of knowledge in relation to pedagogy just by filling out this survey. The survey reaffirmed for me just how important teaching is to me.
- Thank you for conducting this survey. I hope the results will better guide our efforts. We have so much work to do.
- [The survey] reminded me that there is a whole world of SoTL out there and that I wish I had time to make better use of it

VI. Discussion

The purpose of this study was to investigate the teaching practices of faculty members at six Ontario universities and to discover the types of activities they are involved in as teachers and how they learn about themselves as teachers and develop their teaching. In this section, we will discuss the results of the survey in relation to the research questions and with reference to the focus group findings.

1. What are the approaches and methods faculty use to engage in, think about, develop and improve their teaching development?

The methods and approaches that faculty use to improve their teaching are varied, encompassing both formal and informal methods; from reading general literature on teaching and using formal student evaluation forms to soliciting peer feedback and accessing the resources of the teaching and learning centres.

With close to one-third of respondents rarely reading any general literature on teaching (Table 17(a)), Weston & McAlpine (2001) would suggest that they belong in Phase One of their development as teachers, still developing personal knowledge about teaching. Trigwell et al. (2000) would suggest that these teachers are still teacher-focused.

Phase One of Weston & McAlpine's (2001) model also suggests that becoming familiar with what to teach and how to teach effectively involves reading general literature about teaching in addition to literature about teaching and learning within one's own discipline. A little over one-quarter of faculty "rarely" reads literature about teaching and learning within their discipline or field, suggesting that they are still in Phase One of their development.

The practice of using standardized university student evaluation forms to inform teachers about their teaching effectiveness has certain drawbacks. Although widely used, these forms may not be the most effective method to solicit meaningful feedback. Forms provide summative, rather than formative, feedback, but may be beneficial. This sentiment was echoed by faculty in the focus group discussions.

Interestingly, 74 per cent of respondents said they used the university-required evaluation mechanisms to determine how to become a more effective teacher (Figure 8). Almost all the faculty indicated that they employed informal (non-evaluation) feedback from students as a way of determining effectiveness. One of the drawbacks inherent in using only student feedback to accurately assess one's teaching is discerning between constructive criticism and popularity. Faculty from the focus groups expressed the belief that popularity is not necessarily a true indicator of teaching effectiveness and can sometimes be a reflection of students' satisfaction (or dissatisfaction) with their grades. However, there is no empirical evidence within the literature to date to support this sentiment.

A much smaller percentage of faculty indicated that they employed peer evaluation to improve their teaching and learning practices (Figure 8). Akerlind (2007) suggests that teachers need to increase their understanding by actively discovering what works and doesn't work to facilitate student learning and that feedback needs to be sought from both students and colleagues. This idea is echoed within Brookfield's (1995) suggestions to use both the students' and colleagues' lenses for critical reflection. For those seeking opportunities to reflect on outcomes of student learning, peer feedback is very beneficial, and the use of this information to inform or modify teaching methods is also seen as very important.

A number of faculty indicated that they took advantage of the available resources of teaching and learning centres to evaluate their teaching, and the current trend shows that this number is on the increase. Finding time to learn about teaching for an already heavily burdened faculty is challenging. As one respondent put it, "I wish I had time to simply focus on my teaching; it is always a balancing act, and it seems impossible to do all 3 roles (research, administration, teaching) with intensity."

With this in mind, then, there is a continuous need for the teaching and learning centres to reach out to faculty members on an ongoing basis to ensure they are aware of the range and flexibility of services offered, as well as to foster awareness of the types of help available. As one respondent stated, too many people are under the false impression that teaching is something you can learn in a workshop or with a few quick tools, when, in fact, effective teaching, like any other profession, requires a much more substantial

commitment than that. Another respondent reported that they really appreciated the courses/seminars/brown bags offered by the centres for teaching and learning and also felt that every new professor should avail themselves of the week-long summer offering on teaching. This type of offering by centres for teaching and learning holds merit as an option for those indicating they were too busy teaching and conducting research during the fall and winter terms to be able to take time out to focus on teaching development. Finally, one respondent noted that they had learned a lot about their own gaps of knowledge in relation to pedagogy by participating in the survey, and in so doing, the importance of teaching had been reaffirmed.

2. Where, when and how do faculty acquire their knowledge and skills about teaching and learning?

Faculty acquire their knowledge and skills about teaching throughout their professional lives, with a need for substantial support in the early years of their teaching careers. Many learned through a hands-on approach during their graduate study years, as a teaching assistant or in a teaching assistant training program. There has been a movement away from “learn by doing” and an influx of more formal methods over recent years, largely as a result of programs, guidance and teaching development offered by centres for teaching and learning. Informal discussions with peers and access to a mentor early on were both identified as important aspects of one’s growth as a teacher. Teaching and learning centres play a key role in facilitating these collegial relationships. Faculty also indicated a desire for guidance on conducting research in the classroom. The following is an expanded discussion of these key ideas.

General questions about teaching were addressed in Part Two of the survey. In particular, the first two questions served to solicit responses from faculty regarding how they learned how to teach prior to their first academic appointments or at the beginning of their careers.

Two-thirds of respondents indicated that they gained hands-on teaching and learning experience while they were graduate teaching assistants (Figure 1). Focus group members also mentioned the importance of having attended teaching assistant training programs early in their careers, stating that their “hands-on” experience came as a result of graduate teaching assistant experiences. With the rise in the development of teaching and learning centres at universities over time, those respondents who indicated they utilized the “learned by doing” approach (Figure 2), with little or no formal training, may now be eclipsed by faculty members, who, early in their careers, had at least some formal training or preparation for teaching in a classroom setting.

Another important item worth noting involves the percentage of respondents who indicated they had informal discussions with peers about teaching. This was the case for almost half (Figure 1) of the respondents prior to their first academic appointment and almost three-quarters of respondents (Figure 2) indicated that they had informal discussions with peers about teaching at the beginning of their academic careers. Focus group members also discussed the importance of talking to peers in their early careers, mentioning that this was viewed as an important aspect of their growth as teachers and that observing and

working closely with more seasoned faculty was therefore regarded as very beneficial. Akerlind (2007) also supports this view.

Further to this point, when faculty were queried regarding the resources or supports they wished had been in place when they first started teaching, almost half the respondents (Figure 4) indicated that they wished they had had access to a mentor. In keeping with this idea, many respondents wished they had had opportunities to discuss teaching with colleagues early in their careers. This view is widely supported by both Theall & Centra (2001) and Brookfield (1995), who suggest that activities that contribute to a shared public account of teaching are deemed to be valuable for one's growth as a teacher and that sharing with colleagues would be considered an activity that would foster this type of public sharing.

These discoveries highlight the important role that centres for teaching and learning offer for faculty development. Many valuable resources are made available through these centres in that they offer teaching assistant training programs and provide opportunities for colleagues to meet and discuss teaching and learning issues with their peers. While approximately half the respondents (Figure 4) also identified a desire for specific guidance on grading and assessment and test and exam preparation, centres for teaching can offer services that will further benefit teachers in their classroom practices by going beyond help in these areas and facilitating teachers' understanding of their own professional growth and development, which is viewed as critical to learning outcomes (Akerlind, 2007).

Part Three of the survey asked faculty to rank how important they felt a set of specific activities and resources were in their development as teachers. Based on overall percentages of responses, these activities were examined in relation to one another and could be an indicator of how faculty view the role of their institution's centre for teaching and learning. Frequency of use of teaching and learning centres was explored overall (Table 9). More than three-quarters of faculty had used the teaching and learning centres at their institutions between one and four times over the past year, and their satisfaction with these centres was high (Table 10). The largest percentage of faculty overall felt that having assistance with a teaching problem or issue from teaching and learning centres was very important or important (Table 11(a)), and most felt that opportunities provided by these centres to make contact with peers for networking purposes was very important or important (Table 11(b)).

The next-highest percentage of responses related to centres offering support with the promotion and tenure process (Table 11(c)). Just over half of faculty felt that offering help with professional development goals ranked as very important or important (Table 11(d)). It is interesting to note that almost two-thirds of faculty noted the importance of teaching and learning centres offering support for research on teaching (Table 11(e)). This is an area in which centres for teaching and learning excel, especially by keeping in stride with the growing interest in the application of SoTL. A more detailed discussion of research on teaching is included later in this section, under Question 8, which examined faculty beliefs about the importance of teaching versus research.

Interestingly, more than half of faculty indicated that they do not conduct research on teaching (Figure 6), and yet close to two-thirds (Table 11(e)) indicated they believed it was very important or important for teaching and learning centres to offer support in this area. These results are encouraging for centres for teaching and learning staff, as they continue to strive to expand, modify and promote their current offerings and to support faculty in their pursuit of conducting classroom research. It should be noted that centres for teaching and learning also play an important role in helping faculty and departments with curriculum development, tenure and promotion policies and with the overall educational climate on campuses. For example, the recent promotion of University Undergraduate Degree Level Expectations (UUDLES) by the Council of Ontario Universities was assisted by centres for teaching and learning – "behind the scenes." Centres explained the UUDLES to faculty and administrators and helped with their implementation.

When asked what resources they wished had been available when they first started teaching, approximately half of faculty noted that they wished they had had access to a mentor and direction to general teaching journals or discipline-specific journals. Faculty also wished they had had an introduction to the services offered by centres for teaching and learning, and some wished they had had information about how to conduct research on teaching (see Table 4 in Appendix C).Centres for teaching and learning can use this information to ensure that assistance in all of these areas is currently available at their centres and that new, mid-career faculty are aware that their respective teaching and learning centres provide these resources.

3. What is the distribution of faculty engaged in teacher-centred, student-centred and learner-centred models?

A shift away from an emphasis on teacher-centredness and movement towar a more student-focused and learner-centred approach to teaching is apparent from the survey, with more than one-third of faculty using student- or learner-focused models. Trigwell, Martin, Benjamin, & Prosser (2000) describe teacher-centredness as being focused on "what" is taught (the content) and suggest that reading literature about teaching and learning can improve the teaching of content. With a third of faculty selecting a student-focused approach, a trend away from a teacher-centred approach and a movement toward improving student learning outcomes is indicated. Trigwell, Martin, Benjamin, & Prosser (2000) do suggest, however, that this approach is best used in conjunction with other teaching development activities such as critical self-reflection and peer collaboration and review. With almost half the respondents indicating that they engage in peer collaboration or peer-review activities (see Table 31), this progression is clear. Only a very small percentage of faculty indicated that these models did not apply to their own teaching development (Table 15).

Of the faculty who indicated that they were closer to learner-centred teaching, there was almost equal representation among the different ranks, with approximately one-third each of assistant, associate and full professors indicating learner-centredness (see Table 30). The practice of SoTL is closer to learner-centredness according to Theall & Centra (2001) through demonstration of an emphasis on learning outcomes and relevant teaching

practices. The higher percentage of full professors who responded that they were more aligned with a teacher-centred approach than their colleagues may be an indication that they had developed an approach that had worked over the years and that they were not interested in changing. They may not have been interested in seeking out the help of teaching and learning centres to improve their teaching practices or in seeking out innovative approaches to teaching and learning. Brookfield (1995) echoes this view. However, teaching and learning centres can offer a refreshing look at teaching development practices for seasoned faculty while capitalizing on their years of teaching experience by facilitating mentoring opportunities for less experienced faculty members who are eager to learn from their peers.

Trigwell, Martin, Benjamin, & Prosser (2000) describe teacher-centredness as being focused on "what" is taught (the content), and they suggest that reading literature about teaching and learning can improve the teaching of content. With one-third of faculty selecting student-focused approaches, a trend away from teacher-centredness and a movement toward improving student learning outcomes is indicated. Trigwell, Martin, Benjamin, & Prosser,(2000) do suggest, however, that this approach is best used in conjunction with other teaching development activities, such as critical self-reflection and peer collaboration and review. With more than a third of the respondents indicating that they engage in peer collaboration or peer review activities (see Table 31), this progression is clear.

The movement away from a teacher-centred approach – of teaching only content – toward a more student-focused approach is evident, and it is indicative of an effort to improve student understanding. The movement toward a more learner-centred approach to teaching is indicated by the low percentages of faculty selecting closer to teacher-centredness in comparison with higher percentages of faculty selecting closer to a learner-centred approach in their teaching (as shown in Table 30).

All five models of SoTL discuss a progression of the teacher as learner in relationship to the student as learner. To ensure that students are comprehending meaning, Brookfield (1995) suggests that faculty make use of the student lens. A key activity in this progression is reflecting on one's own teaching and using the results to modify one's teaching and then sharing those results with students and peers. When asked whether they invited feedback from peers, well over half the faculty members indicated that they did not invite peer feedback on their teaching. It is worth noting (see Table 30) that close to half of instructors categorized as "Other" (instructors and other teachers who are not assistant, associate or full professors) indicated that they took a student-centred approach to their teaching. This is indicative of part-time faculty moving toward a more learner-centred approach to teaching.

4. Teaching and learning centres support SoTL because the theory suggests it informs teaching practice and facilitates teaching improvement. What is the level of faculty engagement with the models outlined by Akerlind (2007); Brookfield (1995); Kreber & Cranton (2000); Theall & Centra (2001); Trigwell, Martin, Benjamin, & Prosser (2000); and Weston & McAlpine (2001)?

Akerlind (2007)
More than a third of faculty saw themselves as closer to a learner-centred approach (Table 15), with another third identifying their teaching as student-centred and less than 20 per cent indicating that they were teacher-centred. Akerlind defines teaching by how information is shared with students and by the extent to which students understand that information. Akerlind also discusses the importance of experimenting with different teaching techniques. The survey results indicated that faculty were engaged in a range of activities outside the traditional lecture (Table 12).

Brookfield (1995)
A large number of faculty practice self-assessment with the autobiographical lens (Figure 5, Table 20). While practising critical self-assessment is of value for faculty, using only this lens may prevent faculty from discovering some of their lesser-known shortcomings as teachers and thus prohibit improvement of their understanding of teaching and learning. Much less use of the colleagues' lens was discovered, however, with almost two-thirds indicating that they had not invited peers to provide feedback on their teaching (Table 21). An even larger percentage indicated that they had not been invited to visit another's classroom (Table 22). One of the ways teaching and learning centres can help faculty overcome this shortcoming is by fostering peer-review opportunities through centre offerings. By facilitating the development of communities of like-minded faculty members (communities of teachers and learners) across a range of departments, centres for teaching and learning can encourage peer teaching assessments by faculty members who have no stake in the promotion and tenure process of those they assess.

A large percentage of faculty (Table 14) felt that their universities and departments supported their growth as teachers. However, this belief did not translate into more openness to peer assessment of one's teaching. The isolation of teaching still appears to be prevalent, with large percentages restricting their feedback to themselves and students. The results of this survey show that the higher a faculty member ranks, the less likely they are to seek feedback from peers (Table 31). What is not known is whether or not this decrease is a result of an increase in administrative duties and time spent on research, translating into less time spent teaching as faculty advance through stages of their professional development.

Kreber & Cranton (2000)
Kreber & Cranton (2000) build upon Mezirow's (1991) concepts of reflection as a framework for identifying three domains of teaching knowledge, the three being content reflection (trying to describe the teaching process), process reflection (reflecting on teaching strategies or procedures) and premise reflection (which encompasses merit of teaching). Within this framework, they suggest that faculty who know how to motivate

students with awareness of different learning styles show evidence of Process reflection (of the pedagogical knowledge indicators of SoTL). An example of this occurs when a teacher administers a learning-style assessment to their students and subsequently uses the results to modify their teaching approach. Similarly, those who seek out and become informed about the questions surrounding the importance of learning styles exemplify Premise reflection (of the pedagogical knowledge indicators of SoTL). Faculty responses to the questions pertaining to learning styles suggested that these two components of faculty development activities were taking place at the time of the survey, which places them solidly among those faculty members who are developing scholarship in teaching. The majority of faculty indicated acknowledgement of learning styles as a factor they considered for instruction (see Table 24).

Kreber & Cranton (2000) suggest that as faculty grow in their development as teachers and learners, they are better equipped to inform curricular design through asking questions not so much about the content of what is being taught as about students' understanding of the content. This perspective can then be tied to student learning outcomes. Those faculty who are engaged in teaching and learning as a continuous activity, moving toward a more scholarly pursuit of teaching and learning concepts, will be better prepared to identify organizational concepts for the learners in their classrooms. This understanding can, in turn, be used to inform the selection and grouping of content within the overall curriculum. With the majority of respondents indicating that they designed courses with active learning in mind (Table 25) and almost two-thirds (Table 26) indicating that they often designed courses that included new ways of teaching content, these faculty were well positioned to provide informed feedback regarding curriculum design. This is important information, given the fact that almost three-quarters of respondents indicated that curricular changes impacting student learning had occurred within their department within the past five years (Table 27). Furthermore, close to half the changes had occurred within the last year (Table 28), and most faculty felt that those changes would have a positive influence on student learning outcomes (Table 29).

Theall & Centra (2001)
According to Theall & Centra (2001), in order for faculty to engage in SoTL, a shared public account of faculty teaching approaches is warranted. For instance, sharing the design or outcomes of specific aspects of one's teaching in such a way as to invite peer review and feedback begins to disseminate these results throughout one's scholarly community. The exchange of experience, information and ideas by faculty about their teaching prompts reflection about one's own teaching practices while advancing understanding within one's discipline and beyond. This accounting can thereby solicit feedback on teaching development activities not only within the classroom setting, but also beyond, to the level of department, discipline and institution.

At the teacher or individual level, about one-third of faculty indicated that they consulted the literature; at the department level, about three-quarters consulted colleagues; and at the level of the institution, some faculty consulted with their centre for teaching and learning (Table 3 in Appendix C). These activities support teaching and learning

scholarship. The advancement of teaching and learning can then be accelerated through the practice of shared inquiry, which is pivotal to the growth of university teachers.

Trigwell, Martin, Benjamin, & Prosser (2000)
Trigwell et al. suggest that a more teacher-centred or content-focused approach to teaching is important insofar as it will equip teachers to be better able to teach content ("knowing a lot"). Furthermore, they differentiate qualitatively between faculty members reading literature about teaching to improve the teaching of content and their using the literature to inform their own teaching and learning environment. They also suggest that improving the practice of teaching requires reflection and the use of peer review to improve student learning. With about 30 per cent of faculty consulting the literature (see Table 3 in Appendix C) and close to two-thirds of faculty indicating that they do not invite feedback from peers (Table 31), Trigwell et al. would suggest that improvement is needed in both of these areas in order to promote faculty growth. The goal is ultimately to improve both teacher and student learning while simultaneously sharing this knowledge and experience with others.

Weston & McAlpine (2001)
In order for the centres for teaching and learning to assist faculty with their development as teachers and scholars, it is suggested that more support must be provided to help professors transition in the manner outlined by Weston & McAlpine's Phase Three Growth as Scholars. Teaching activities characteristic of this phase are as follows: make presentations and produce publications about teaching; carry out research about teaching; publish research about teaching; mentor others doing research about teaching; and gain knowledge of research and literature on teaching and learning. SoTL encompasses many, if not all of these activities. Given the definition of SoTL included in the survey, more than half the respondents indicated that they either sometimes or rarely engaged in the practice of SoTL (Table 16). This provides clear evidence to support centres for teaching and learning in their efforts to offer SoTL practices to faculty by encouraging faculty engagement in Phase Three teaching development activities.

5. What is the difference between those teachers who are engaged in teaching and learning by employing Brookfield's and other SoTL theoretical models into their teaching development activities and those who do not?

A very large majority of faculty (Figure 5) indicated that they had used both the autobiographical lens and the students' lens for assessing their teaching. Half the respondents had used Brookfield's (1995) colleagues' lens and a little less than half of respondents had used the theoretical lens for assessing their teaching.

According to Brookfield (1995), the autobiographical lens is useful for instructors who want to become critically reflective teachers. However, using only this lens may prevent faculty from discovering some of their lesser-known shortcomings as teachers, and it may prohibit faculty from improving their understanding of teaching and learning. Therefore, in addition to practising self-assessment through the use of the autobiographical lens, Brookfield (1995) suggests that the colleagues' lens is useful in uncovering those behaviours that are

hidden from our view and may escape the autobiographical lens. Just under half (Table 21) of faculty had invited colleagues to provide feedback on their teaching, whereas about one-third (Table 22) indicated that they had invited colleagues to visit their classrooms, revealing opportunities to offer faculty further development as teachers by providing activities encompassing the use of the peer or colleagues' lens.

6. Do most university instructors have a lack of formal training as teachers, or have minimal training, so they learn how to teach on a "trial and error" basis – using a "learn by doing" approach?

Part Two of the survey asked general questions about teaching to discover the point in their careers (or before) at which faculty started to learn about teaching. The survey looked at where this learning was happening and with whom. Faculty responses were solicited pertaining to how faculty learned about teaching prior to and at the beginning of their academic appointments and pertaining to current practices. More than two-thirds of faculty had gained their experience through hands-on activities during graduate teaching assistantships prior to their first academic appointment, with almost half indicating that they had had informal discussions with peers (Figure 1).

Almost all faculty learned by doing at the beginning of their careers, with three-quarters indicating that they had held informal discussions with their peers (Figure 2). The same apparently held true at the time of the survey, as almost all faculty indicated that they were currently learning about teaching by doing. In addition, three-quarters of faculty indicated that they were currently consulting with their colleagues about teaching (Figure 3). While the percentage of new faculty engaging in formal teaching and learning training is on the rise, the survey results also showed that prior to their first academic appointment, less than one-fifth of faculty had taken a graduate student course on teaching and learning, with an even smaller number of faculty indicating that they had acquired teaching certifications and only a few receiving K-12 education training (see all responses in Table 1 in Appendix C).

7. How interested are faculty in developing as teachers by engaging in and learning about SoTL?

When faculty were asked how they were currently learning about teaching, a number of respondents (Figure 3) indicated that they were conducting research on teaching. Interestingly, close to the same percentage of faculty had indicated that they wished they had had access to information about how to conduct research on teaching when they were first starting out in their teaching careers (see Table 4 in Appendix C).

A small number of respondents felt they had never engaged in SoTL activities (Table 16(b)), and few of the respondents indicated that they had never read any general literature on teaching (Table 17(a)). This finding is interesting, as the theory suggests that becoming familiar with what to teach and how to teach effectively involves reading general literature about teaching as well as literature about teaching and learning within one's own discipline. Centres for teaching and learning help faculty to locate current literature

pertinent to their specific teaching and learning needs, thereby reducing the amount of time faculty need to spend seeking these resources on their own. Centres also play an important part in the teaching development of faculty by offering educational development programs that provide a foundation in pedagogical and pedagogical content knowledge – see Kreber & Cranton (2000) for an in-depth look at this – or by providing formal means or methods for the use of reflective practices to improve teaching. Centres for teaching and learning can then play a more pivotal role in facilitating faculty growth in SoTL. This help could serve as a catalyst to encourage faculty to move along the continuum of growth toward SoTL, in accordance with research conducted by McAlpine & Weston (2000). In further studies, Weston & McAlpine (2001) indicate that teachers in Phase 3 (Growth in Scholarship of Teaching) are growing in understanding of the complexity of teaching and learning by moving beyond Phase 2 engagement activities such as dialogue with colleagues and instead are actively and intentionally integrating teaching and the scholarship of discovery to become scholars of teaching and learning.

Much discussion has taken place (focus groups, peer discussion groups, etc.) regarding the inherent differences in teaching in different disciplines and regarding the fact that it is important to learn to teach specific to one's particular discipline. If this is really the case, it stands to reason that there would be more interest in reading about one's specific discipline than about general literature on teaching and learning. However, the results of this survey show that there is little difference between the two (see Table 17(a) and (b)).

Sharing reflections on websites (personal blogs, discipline-focused websites or teaching and learning websites) was less common than other pedagogical techniques (see Table 7 in Appendix C). This may have implications for faculty development, as most students today make extensive use of online social communities or networks (such as Face book) for their communication.

Fifty-six per cent of respondents (see Table 6 in Appendix C) indicated that they did not conduct classroom research (respondents were asked to select "not applicable" if they did not conduct classroom research). Given high faculty workloads, teaching and learning centres provide much-needed support in conducting successful, manageable classroom research projects by helping faculty to start small and build from there.

A third of respondents noted that they used the results of their classroom research to modify their own teaching, with smaller numbers of faculty indicating that they shared the results with students, colleagues or at conferences. While a small number of respondents felt that they had engaged in the practice of SoTL "very often" and while a few more indicated "often" (Table 16(b)), close to one-third of the respondents indicated that they "sometimes" engaged in SoTL, with another third indicating that they "rarely" did. A small number of faculty selected "never" having engaged in SoTL.

Given the definition of SoTL, wherein faculty engage in classroom research, it is interesting to compare the responses from more than half the faculty, who indicated that they had not conducted classroom research (see Table 6 in Appendix C) with a much larger number of those who felt they had, at least on occasion, engaged in SoTL (Table

16(b)). As these two are closely related – in fact, SoTL embodies classroom research – then the discrepancy between these responses may stem from a lack of understanding of the distinctions between the two. The result is not surprising, however, as SoTL and all that it embodies may not be widely understood among faculty. Not all classroom research can be considered SoTL, yet perhaps much more of it could be if faculty were to understand the distinctions between classroom research, scholarly teaching and SoTL. Centres for teaching and learning play a vital role in working with faculty members who are conducting classroom research. Centres offer guidance in applying academic rigour to the studies, support with publishing the results of classroom research and options for sharing results with the scholarly community at large. Centres for teaching and learning are key facilitators in helping faculty advance toward the practice of SoTL.

Further to this idea, 58 per cent of faculty felt that it was very important or important for teaching and learning centres to offer help with research about teaching (see Table 11(e)). It is interesting to note that the majority of faculty indicated that they were engaging in the practice of "scholarly" teaching (Table 16(a)), whereas Kreber & Cranton (2000), McKinney (2004) and others show that there is a distinction between scholarly teaching and SoTL. Scholarly teaching is considered one element of SoTL, along with disciplinary research and educational research (Taylor & Dawson, 2006). Furthermore, Trigwell et al. (2000) describe scholarly teaching as making "transparent how we have made learning possible" (p. 156), which is, in fact, a part of SoTL. SoTL, however, goes a step beyond scholarly teaching by embracing critically reflective and collaborative processes and opening up the results of these reflections to peer review. Through the use of SoTL, faculty can communicate beyond their classroom or discipline, making contributions to the scholarly community at large. Essentially, faculty members engaged in SoTL shift the emphasis away from teacher centredness toward more student-focused approaches. The idea here is that when teaching practice improves, student learning also improves. This may ultimately achieve a more learner-centred approach, which is beneficial to both student and teacher.

8. Do most faculty members believe that research is regarded more highly than teaching, and therefore when prioritizing time, engaging in teaching development activities is seen as less important than research activity?

The percentage of respondents indicating that they did not conduct classroom research was high overall (see Table 6 in Appendix C). With the large majority of faculty indicating that they agreed that disparity exists between the merits of research and teaching (Table 23), it is apparent that an emphasis on conducting traditional research (related to one's discipline or field) is an outcome of this belief. This is important to note, as a large percentage of faculty indicated that they believed teaching was very important or important to their overall professional practice (see Table 7).

This belief can influence faculty participation in teaching and learning activities. It can act as a deterrent to conducting classroom research if traditional research is regarded as having greater merit than classroom research. A potential outcome of this belief is that faculty will be less likely to want to participate in teaching development activities

associated with classroom research and ultimately SoTL. Theall & Centra (2001) state that faculty need training in the process, documentation and dissemination of classroom research. Teaching and learning centres fill this gap by offering guidance on how to conduct research on teaching. It is apparent from the survey that faculty were interested in having teaching and learning centres support research on teaching (Table 11(e)). Centres for teaching and learning provide education and training of educators in the practice of SoTL. In so doing, they can strengthen the value of classroom research as a valid and important type of research, which can be held to the same standards as traditional research within one's own discipline. By providing this service, centres for teaching and learning can be regarded as playing a critical role in efforts to improve the academy and the quality of teaching and learning at institutes of higher learning overall.

In support of this vital role that centres for teaching and learning can continue to play, Kreber & Cranton (2000) suggest that when faculty reflect on findings of educational research in relation to their own teaching experiences, it becomes a rigorous activity. When constructing valid, context-specific knowledge about teaching, they further suggest that research about teaching can have equal standing with traditional research activity for the purposes of promotion and tenure review.

VII. Conclusions

The research project investigated the teaching practices of faculty members at six Ontario universities (Lakehead University, Laurentian University, Queen's University, Ryerson University, The University of Western Ontario and University of Guelph). The study examined the types of activities that teachers engaged in prior to and at the beginning of their academic careers, as well as examining what teachers wished had been available when they first started teaching. How faculty members are currently engaged in teaching development activities and how they are learning and developing as teachers was further studied. Faculty's use of self-reflective, student, peer and theoretical perspectives were explored, to provide teaching and learning centres with an understanding of how teachers are learning to teach in order to discover methods for enhancing and improving their learning. Focus groups consisting of faculty members who had won teaching awards and an online survey of faculty were used to solicit responses, with a solid grounding in teaching and learning theory as the framework for the research questions.

The focus groups of faculty members who had won teaching awards proved successful in several ways. First, the information gathered through the frank and open exchange among faculty members from various disciplines and experiences was beneficial in providing pertinent background information to inform the creation of questions for the survey questionnaire. Second, many of the faculty who attended the focus group sessions expressed interest in being involved in further discussion groups and sharing of their teaching experiences. It would be useful if the teaching and learning centres of each of the six institutions started to build on this forum and offer more opportunities for this type of exchange within their centres without delay. Third, the focus group discussions helped delve into faculty attitudes and feelings concerning teaching and learning, which may have

been missed when using solely quantitative data for analysis. The combined approach thereby elucidated a richness and depth of insight into thoughts and reflections among today's university professors that may not have been captured otherwise.

The online survey of faculty also had strengths. First, there was a commendable response rate, of about 21 per cent, across the six universities. Even though the survey was launched in the spring, at a time when faculty are typically focused on their research, many indicated in the open-ended responses that they felt the survey [teaching] was very important and therefore took the time from their busy schedules to participate. Secondly, the six universities were each able to provide lists of their faculty members' e-mail addresses so that the introductory e-mails could be sent out. Thirdly, a French translation of the survey for Laurentian University was generated and disseminated in addition to the English version.

Because the study was multicentred, some logistics had to be overcome with regard to the production and distribution of the survey. For example, each of the six universities uses different names for their divisions: colleges, schools, units, departments, etc. This meant that extensive examples had to be provided within the survey questionnaire questions, to provide clarity. The ethics approvals process differed widely across the six universities, contributing to a delay in survey distribution.

Overall, the study was successful in illuminating several key results useful for directors and staff of teaching and learning centres as well as educational developers and department chairs at Ontario universities and across Canada. Some main findings of the study follow.

Educating University Educators

Within the context of educating university educators, there is a trend toward graduate student certification and educating educators. Those nearing retirement indicated that they learned by doing or through trial by fire, whereas the trend today is for new and assistant professors to have received at least some form of teacher training before their first academic appointment. The trend is moving towards graduate students having teaching assistantships and toward certification for teaching and learning. Close to 70 per cent of the respondents indicated that they had gained hands-on teaching and learning experience while they were graduate teaching assistants. This is due in part to the fact that many institutions did not have teaching and learning centres in the past and newer faculty may be taking advantage of these offerings more than their seasoned colleagues.

Collegial Peer Engagement Practices

Some faculty modelled their teaching on role models who had taught them, with many faculty respondents noting that they had participated in informal discussions with peers about teaching. Over half the respondents in the survey wished they had had a formal mentor to help them learn how to teach. Therefore, inasmuch as informal discussion with colleagues has proven to have merit, it is also important to note that more formal guidance

or structure is desired and needed in order to foster an exchange among faculty members about their teaching experiences. In addition, many faculty members expressed a desire for collegial support and for validation from chairs and deans that teaching is valued beyond its intrinsic rewards. Furthermore, while most professors indicated that they readily employ the lens of self-reflection and use their student evaluations to inform and adjust their teaching practices, many do not use their colleagues as reviewers despite the fact that this is strongly suggested in the literature as a way of improving one's teaching. There are also opportunities for centres of teaching and learning to offer resources in this regard, through organizing a community of like-minded professors from across many disciplines to help provide constructive feedback on teaching practices.

For faculty who had started their careers without the resources of a teaching and learning centre, several said that a centre would have been an invaluable resource, particularly if sessions had focused on the fundamentals of teaching. Faculty indicated that they wished help had been available about learning how to teach when they started because they could then have avoided some of the pitfalls of the "learn by doing" approach.

A recurring theme throughout the responses from the focus groups was the importance of finding the right balance of teaching, research and other academic duties – hence the need for centres to continue to offer support for both personal and professional and development activities. With new faculty challenged by an initial learning curve and juggling commitments in their early years, the importance of centres cannot be underestimated, as they can offer support for teachers in determining work-life balance and navigating the waters of fledgling professorship. For more seasoned faculty, the opportunity to conduct classroom research may be a way to revitalize a professor's career, since they can use their years of teaching experience to provide insight for those with less time and training as faculty.

Centres for Teaching and Learning

It was found that 78 per cent of faculty had used the services of the teaching and learning centres to improve their teaching (see Tabel 9).and that the vast majority (85 per cent, shown in Table10) were satisfied or very satisfied with the help they had received. However, assistant professors were more likely than full professors to make use of these resources. While centres have in the past offered and continue to offer help in these areas, there is still an ongoing need to investigate other methods to encourage more faculty members to use the centres' services. The findings suggested several avenues for the expansion of the role of teaching and learning centres that could lead to improvements in student learning. Specifically, centres could do more to facilitate the development of SoTL by supporting faculty in their research related to teaching. Many faculty indicated that they would like assistance with this type of research. In addition, centres could offer new ways of helping support formal mentoring programs and helping encourage the development of more communities of practice where faculty could engage in deep dialogues on topics related to teaching.

Focus group findings indicated that teachers like e-mailed versions of short articles that are applicable to a particular teaching practice, method or approach because they can be read and then readily applied in the classroom setting for experimentation. Centres offer faculty valuable direction concerning critical reflective practices and guide them in their reflections as to what works and what does not by making these resources available and showing how these offerings can be adapted more readily to improve student learning.

Scholarship of Teaching and Learning

This research was grounded in the scholarship of teaching and learning, a wide field, which is also growing in breadth and depth. SoTL was viewed as the predominant theory lens in Brookfield's (1995) model of four lenses (self, students, colleagues and theory). It is apparent from the survey that a shift away from an emphasis on teacher-centredness and a movement toward more student-focused and learner-focused approach to teaching is occurring. Assistant professors indicated that they were likely more learner-centred than their associate or full professor colleagues.

Research on Teaching

Almost 20 per cent of faculty members are currently conducting research on teaching, and many expressed an interest in getting help with this research. Centres can offer resources and guidance as to how to start small in a classroom research project and then expand to larger projects over time. For those already engaged in classroom research, there is an opportunity for fostering understanding and application of the Scholarship of Teaching and Learning, so that those faculty-researchers can push beyond the classroom and institution.

This research project investigated the teaching practices of faculty members at six Ontario universities. The study examined the types of activities that teachers are engaged in and how they are learning and developing as teachers. The focus group findings and online survey questionnaire each contributed to a more solid understanding of how university professors are learning how to teach.

The research questions actively solicited responses using both qualitative and quantitative methods, and they were firmly grounded in teaching and learning theory. They therefore revealed insights about teaching that had heretofore remained undocumented. This data can now be used as a baseline for further data collection and is useful in measuring progression in the growth and development of teachers in their practice.

A "wisdom of practice" as suggested by Kreber & Cranton (2000, p. 478) includes the use of theory and reflection upon it, together with knowledge about teaching acquired through research and experience in the classroom. This is an aspect that promotion and tenure review may overlook in emphasizing products such as teaching evaluations and published works. In order to help faculty develop their practice, centres for teaching and learning play a key role in helping teachers understand the process by which faculty learn about teaching and helping them understand how that knowledge is acquired (Kreber & Cranton,

2000). SoTL includes demonstration of teaching knowledge and continuous learning about teaching.

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