A Study of the Impact of Services of a University Teaching Centre on Teaching Practice: Changes and Conditions

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The aim of this study was to assess the impact of educational development activities offered at our teaching Centre. To achieve this aim, the authors explored the impact of our services beyond the data generally gathered, namely those concerning participation, satisfaction with and knowledge acquired during a workshop. Data were collected through an on-line survey. The 115 participants in the study—lecturers, professors, and teaching assistants—represent about 20% of the 630 users who received services offered by the Centre during an 18-month period. Overall, the results tend to show that participants in the Centre's activities have noted changes in their teaching and learning conceptions. Most of them have modified their teaching practice somewhat, and some even observed an improvement in their students' learning. In addition, some say that they are more engaged in their educational development and in pedagogical activities at the institution. The survey allowed the authors to identify conditions that have facilitated change. Overall, this study has helped reveal the direct and indirect effects of the Centre's educational development work on teaching, and it has provided the authors with useful data for decision making and practice improvement regarding the Centre's services.

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Introduction

Many university professors begin their careers with no formal training in teaching. According to Knight, Tait, and Yorke (2006), professional development often results from informal learning through teaching, personal readings, discussions with colleagues or students, and the like. Professors also participate in formal learning activities that are generally offered by teaching and learning centres in the form of workshops, consultations, and online resources. These activities are an integral part of the services established to fulfill the educational development mandate entrusted to us. In a service context, it is common practice to assess user satisfaction in order to ensure quality improvement. The educational development services of teaching and learning centres (TLCs) seem to be no exception, at least in North America. Contrary to popular belief, a national study conducted by Chism and Szabo (1997) reveals that TLCs generally evaluate their services in order to improve them. However, the results obtained are often intended for internal use and are rarely published. In Canada, Kreber and Brook (2001) note that even if most centres try to evaluate certain aspects of their services, evaluations covering all of their activities are infrequent, and evaluations of the *outcomes* of activities are especially rare.

Such evaluations are necessary, however, to account for the direct and indirect effects of educational development activities on the quality of teaching provided. Furthermore, they are necessary to legitimize the presence of a TLC in an institution, particularly in the context of budget cuts. We are often expected to demonstrate the relevance of our activities while ensuring that they meet the needs of the university community. A systematic and ongoing evaluation of our services is, therefore, crucial to ensure that our needs analysis corresponds to the reality perceived by the community and that our services meet these needs (Chism & Szabo, 1997; Kalish & Sorcinelli, 2007; Plank, Kalish, Rohdieck, & Harper, 2004).

Our centralized teaching Centre provides teachers with support throughout their careers. We intend the services we provide to improve teaching practice in order to enhance the quality of student learning**.** To attain this dual objective, we offer educational development activities (EDAs) as part of the teachers' orientation and continuously thereafter. Activities include orientation workshops intended for new faculty, workshops on various pedagogical topics, individual consultations, and group faculty development activities. Online resources are also available.

Our orientation activities and educational development workshops are generally of short duration and are oriented toward appropriation of

teaching and learning principles and of methods and strategies applicable to practice. The format of our activities favours reflective practice, sharing among peers, and active participation by teachers.

Literature Review

What might we learn from the literature on teaching and learning centres' evaluation practices? First, we can learn that TLCs recognize the importance of assessing educational development activities and that they frequently assess activities upon their completion (Chism & Szabo, 1997; Kreber & Brook, 2001). However, given time and resource constraints, centres focus primarily on assessing participation rates in activities and the degree of participant satisfaction (Chism & Szabo, 1997; Kreber & Brook, 2001; Plank et al., 2004). The results of these evaluations tend to show that activities offered by centres are very favourably received by participants. The assessment of participant satisfaction is important not only to determine the immediate beneficial effects of centre activities, but also because satisfaction seems to have a positive effect on changes in teaching over the longer term. According to a study by Rust (1998), the more favourable assessment an activity receives, the greater the chance of changes in participants' practice.

It is noteworthy that only a very few centres have examined the impact of their activities on teachers' practice (Coffey & Gibbs, 2000; Piccinin, Christi, & McCoy, 1999; Piccinin & Moore, 2002; Spafford-Jacob & Goody, 2002) or on their conceptions of teaching (Ho, Watkins, & Kelly, 2001; Polich, 2008). Furthermore, if some educational development centres have sought to assess the impact of their activities on practice or conceptions, they generally have limited their assessment to only one of their activities, for example:

- workshops (Rust, 1998; Spafford-Jacob & Goody, 2002);

- consultations (Piccinin et al., 1999; Piccinin & Moore, 2002);

- communities of practice (Polich, 2008); or

- programs intended for new professors (Coffey & Gibbs, 2000; Stes, Clement, & van Petegem, 2007).

To our knowledge, until now, very few assessments have covered all of the services of a centre and included all of its users.

Lastly, although the tendency has been to gather mainly quantitative assessment data, centres are increasingly trying to collect qualitative data through open-ended questions in online questionnaires (Stes et al., 2007), interviews (Ferman, 2002; Langevin, 2007; Postareff, Lindblom-Ylänne, & Nvegi, 2007), teaching observations (Elliot, Skeff, & Stratos, 1999; Polich, 2008), or strategies such as those suggested by Kreber and Brook (2001), which include content analysis of teachers' learning journals, teaching philosophy statements, and concept maps.

Our review of the literature provides an overview of the assessment practices of TLCs. In light of this review, there are two characteristics that distinguish our study. First, we seek to assess the effects of all activities of a centre on all users. Second, we aim to assess the effects of our activities beyond participant satisfaction. To help us define the dimensions we wish to examine, we considered various models that have been used to assess the impact of educational development activities.

Models That Assess the Effects of Educational Development Activities

Our starting point was the five-level model proposed by Guskey (2000), which assesses the impact of professional development activities in a school setting. This model was further developed by Stes et al. (2007) following their study in a university context. We also drew on Kreber and Brook's (2001) six-level model designed to assess the impact of activities of a teaching centre. Furthermore, we took into account the levels that Colbeck (2003) uses to assess the impact of an educational development program designed for doctoral students who intend to pursue an academic career. This program is offered in over 100 American universities. His model is a modification of Kirkpatrick's (1994) four-level model, which is designed to evaluate professional development programs in the spheres of business and industry. We distinguished 10 dimensions of educational development that can be assessed. Table 1 summarizes the dimensions we compiled from these models.

These 10 dimensions are of increasing methodological complexity, in that the effort required to collect compelling data increases at each level. It is certainly easier to measure participation in activities than to determine whether participants truly have applied what they learned (Kreber & Brook, 2001).

Table 1

Study Dimensions According to Faculty Development Models

Levels	Dimensions	Meaning
1	Participation (Colbeck, 2003)	Were there participants in the activity? Who were they? From which units did they come?
2	Satisfaction (Colbeck, 2003; Guskey, 2000; Kreber & Brook; 2001; Stes, Clement, & van Petegem, 2007)	Did participants appreciate the activity?
3	Learning (Colbeck, 2003; Guskey, 2000; Stes, Clement & van Petegem, 2007)	Did the activity prompt changes in participants' knowledge, skills, or attitudes?
4	Support for change from the organisation (Guskey, 2000; Stes, Clement, & van Petegem, 2007)	Were participants able to apply new knowledge? Did participants feel supported in the implementation of the changes to their practice?
5	Conceptions (Colbeck, 2003; Kreber & Brook; 2001; Stes, Clement, & van Petegem, 2007)	Did the activity lead participants to change their conceptions of teaching, learning, or assessment?

Table 1
Study Dimensions According to Faculty Development Models (*continued*)

Levels	Dimensions	Meaning
6	Application to practice (Colbeck, 2003; Guskey, 2000; Kreber & Brook; 2001; Stes, Clement, & van Petegem, 2007)	Did the activity induce changes in behaviour?
7	Students' perception (Kreber & Brook, 2001)	Do students perceive the changes in their teacher's practice?
8	Student learning (Colbeck, 2003; Guskey, 2000; Kreber & Brook; 2001; Stes, Clement, & van Petegem, 2007)	Has the activity caused changes in students' learning? Has it affected their success? Their perseverance?
9	Institutional impact (according to Stes, Clement, & van Petegem, 2007)	Do teachers tend to be more involved in pedagogy at their institution? Are they part of educational committees? Do they act as teaching leaders in their units?
	(according to Colbeck, 2003)	Has retention of teachers in the institution improved? Is there a stronger feeling of belonging to the teaching community?
10	Culture of the institution (Kreber & Brook, 2001)	Have the activities of the centre engendered changes in institutional culture?

Dimensions Retained for Our Study

As part of our exploratory study, given that we have already collected data on the first three dimensions following several of our activities, we decided to examine the following dimensions in Table 1: conceptions, practice, support for change, student learning, and institutional impact. These choices are justified because, for our team and in accordance with the mandate of our Centre, our work has meaning only if teachers put into practice some of the principles, strategies, or teaching and learning methods that we put forth. It is for this reason that the practice dimension is at the heart of our study.

According to Cranton and Carussetta (2002), a teacher's practice is dependent on a complex set of factors, including, among others, personality, characteristics of the discipline, characteristics of the students, teaching context, and conceptions of teaching. Weston and McAlpine (1999) and Ho et al. (2001) contend that changes to practice are impossible without changes in conceptions of teaching. We, therefore, consider it necessary that our study be able to identify changes in reaching conceptions.

Given the importance of improving teaching practice, our data collection also provided an opportunity better to understand the conditions that favour faculty members' changes in teaching practice along with the difficulties they face. A better understanding of the change process could help us provide better support (Smyth, 2003).

Because improving teaching practice is ultimately intended to improve the quality of learning, we also tried to identify how teachers who report having changed their practice perceive the effects of this change on student learning. Schlager and Fusco (2004) observe "an explicit relationship between teachers and their relationship with both the teaching community and with their teaching practices" (in Chanier & Cartier, 2006, p. 65; translated from original French). They also maintain that "teachers who played important roles in their teaching community were more likely to use constructivist and collaborative instructional strategies in their classrooms, while teachers who were less engaged in collaborative activities with other colleagues were more likely to use direct instruction and individualized learning tasks" (in Chanier & Cartier, 2006, p. 65; translated from original French). Changes observed in the institutional impact dimension can therefore shed light on teachers' practices.

Finally, we have added one dimension to those discussed in the literature: engagement in the Scholarship of Teaching and Learning (SoTL). This dimension allows us to answer questions, such as "Are teachers more inclined to consult the higher education literature if they use CTL

services?" and "Are they more likely to conduct action-research on their practice and disseminate the results of their efforts?"

Many authors, including Weston and McAlpine (2001), Ashwin and Trigwell (2004) and Weimer (2006), recommend enhancing the quality of teaching practice through research on teaching. They describe stages in the progression of teachers' teaching inquiry abilities on a scale ranging from reflection on teaching (stage 1), to communication with colleagues (stage 2), to research on practice (stage 3). Given that one of the goals our Centre's activities is to develop teaching as a reflective activity informed by research (Bélanger, 2007), we expect our assessment to identify manifestations of changes in practice that we can link to these stages.

We have, thus, produced an assessment framework for the activities of a centre that includes all the dimensions inventoried plus a new dimension, engagement in SoTL. All of these dimensions deserve to be retained for future assessments because they can all supply compelling data in line with the objectives of our activities and those of the institution. The shaded dimensions in Figure 1 are those we investigated in this study.

Objectives

The aim of this study is to assess the impact of services offered by our Centre by examining data beyond the type of data generally gathered, such as participation, satisfaction, and knowledge acquired during a workshop. Accordingly, the first goal of our study was to determine whether there were changes along the following dimensions in teachers who had received the services of our Centre: (1) conceptions of teaching, (2) application to practice, (3) student learning, (4) institutional impact. The second goal, which concerns support for change, was to identify conditions that facilitate or hinder teachers' attempts to modify their practice. Finally, the third goal was to explore whether there were differences between participants in terms of the nature of activities in which they engaged and changes reported as a function of their role (teaching assistant, lecturer, or professor) and years of teaching experience (novice, intermediate, or experienced).

Methodology

This qualitative study uses an exploratory research approach. The data were collected through a survey, which we considered the most appropriate method for reaching the largest number of participants and providing data on the questions of interest. Nonetheless, this method has

Figure 1
**Assessment Framework for Activities
of an Educational Development Centre**
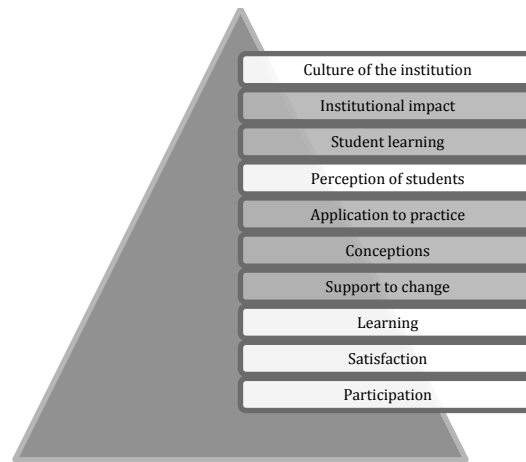
a limitation concerning the possibility of clarifying participants' responses.

Participants

The 115 participants in the study represent about 20% of the 630 users who received services offered by the Centre between September 2006 and February 2008. These individuals held the following positions: teaching assistant (A), lecturer (L), or professor (P). The respondents originate from all 13 faculties of the university; 64% are female, and 44% had fewer than four years of teaching experience. The number of participants was deemed sufficient for an exploratory study. Initial findings allowed us to draw an overall picture of the impact of our services and to bring out further investigation areas. Conducting interviews with a certain number of participants in the future will provide us with the information needed to gain a more in-depth understanding of how we can make a difference.

Services Offered

As described above, the services offered by our Centre are numerous

and diversified. However, in this study, we are more specifically concerned with the impact of services related to initial individual educational development activities (for example, workshops on university teaching and learning) and ongoing individual educational development (for example, online tutorials, individual consultations, workshops).

Instrument

An online questionnaire was designed anonymously to gather participants' perceptions of the impact of our services relative to six dimensions targeted by our study. The instrument designed by Plank et al. (2004) served as a starting point for the design of our questionnaire and, in particular, three questions concerning changes made by teachers: *"How have you changed your teaching practice since you started working with us?"* "*Please indicate the changes you have made since you began interacting with our Centre,*" and "*Please give one or two examples of changes you have made.*" These questions were focused exclusively on the dimension concerning the application of instructional strategies and methods. However, in line with our assessment framework, we formulated open-ended and closed-ended questions that allowed us to gather additional data regarding conceptions of teaching, student learning, commitment to university pedagogy, institutional commitment, and support for change. The final survey comprised 16 questions: eight open-ended questions, two closed-ended questions, and six socio-demographic questions.

The questionnaire was validated in two phases. The first phase was carried out by three specialists in university pedagogy: a consultant in teaching and curriculum assessment, a professor of education, and a director of a university teaching centre. They were asked to comment on the clarity of each of the statements and their relevance to the goals of the study. Based on their comments, the questionnaire was modified and then submitted to four participants who had received services from our Centre. During this second phase of validation, respondents completed the questionnaire and confirmed the clarity of the statements. We then e-mailed the online questionnaire to the 630 people who had received our services between the fall of 2006 and the winter of 2008.

Results

In this section, we describe the changes reported by teachers following the use of one or more of the services offered by the Centre. We also report on the conditions that either facilitated or hindered changes that teachers

tried to make. To answer the research question "How have the services offered by the Centre affected teachers?" we collected both qualitative and quantitative data regarding changes made by teachers along the five dimensions of the study: (1) conceptions of teaching, (2) application to practice, (3) commitment to university pedagogy, (4) student learning, and (5) institutional impact. Furthermore, analyses of the qualitative data brought to light a sixth dimension: changes in teachers' attitudes. To analyze the results obtained, we grouped the dimensions being studied according to three of the four dimensions in the typology proposed by Kirkpatrick (1994), namely, changes in learning, behaviour, and influence. As Figure 2 indicates, the *learning* dimension includes changes to conceptions of teaching and teaching knowledge; the *behaviour* dimension relates to changes in teaching practice, including attitudes toward students and oneself, along with teachers' commitment to their professional development. The *influence* dimension includes perceived effects of the change on student learning and on the institution. We do not consider the *reactions* dimension because data related to teacher satisfaction were not analyzed in this study. Before presenting the results for each of the dimensions studied, we outline the services that participants used according to their role and years of teaching experience.

Services Used

Teaching assistants (A), lecturers (L), and professors (P) are the groups of people to whom the Centre directs its services. These services consist of introductory teaching workshops designed for each of the three groups, teaching and learning workshops, technology workshops, and teaching consultations. Introductory teaching and learning workshops were attended only by lecturers and teaching assistants. Note that this is the only activity offered to teaching assistants, who do not have access to other types of workshops or consultations. Workshops and consultations were used by over 44% of lecturers and professors. Proportionately, more lecturers participated in teaching and learning workshops than did professors (L: 68%; P: 56%), whereas more professors participated in technology workshops (P: 78%; L: 53%) and consultation activities (P: 55%; L: 44%).

Grouping the data according to the number of years of respondents' teaching experience (see Figure 3), namely, novice (0-4 years), intermediate (5-19 years), and experienced (20 years or more), brought to light patterns in the types of services that each group uses. Thus, with the exception of introductory teaching and learning workshops, we find that the percentage of individuals who use consultation services and who attend teaching and

Figure 2
Categories of Dimensions
According to Kirkpatrick's (1994) Typology
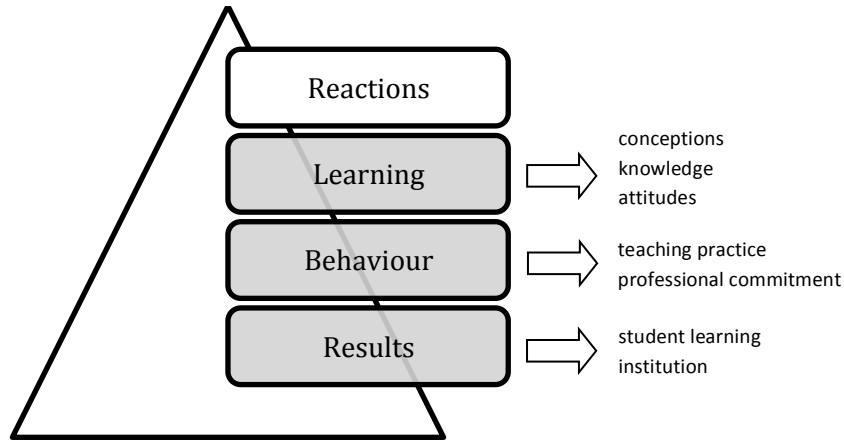
learning workshops and technology workshops increases based on the number of years of teaching experience. These results may be an index of loyalty of the teaching clientele to the Centre's activities. However, we do not know for how many years the respondents have been participating in the Centre's activities. It is also possible that intermediate and experienced teachers dedicate more time to pedagogy than do novice teachers.

Regarding the introductory teaching workshops, offered only since 2001, few experienced teachers (13%) have participated compared with novice (70%) and intermediate teachers (58%). In addition, intermediate (47%) and experienced (58%) teachers use the teaching consultation services more frequently than do novices (30%). Teaching assistants are not included in this result because they do not have access to consultation services.

Changes Reported

Quantitative Data

As Figure 4 indicates, the changes most frequently reported by the three groups of respondents pertain to behaviour, and to teaching practice in particular (A: 67%; L: 95%; P: 85%). About one third of each of the groups

Figure 3
**Types of Services Used
in Relation to Respondents' Teaching Experience**
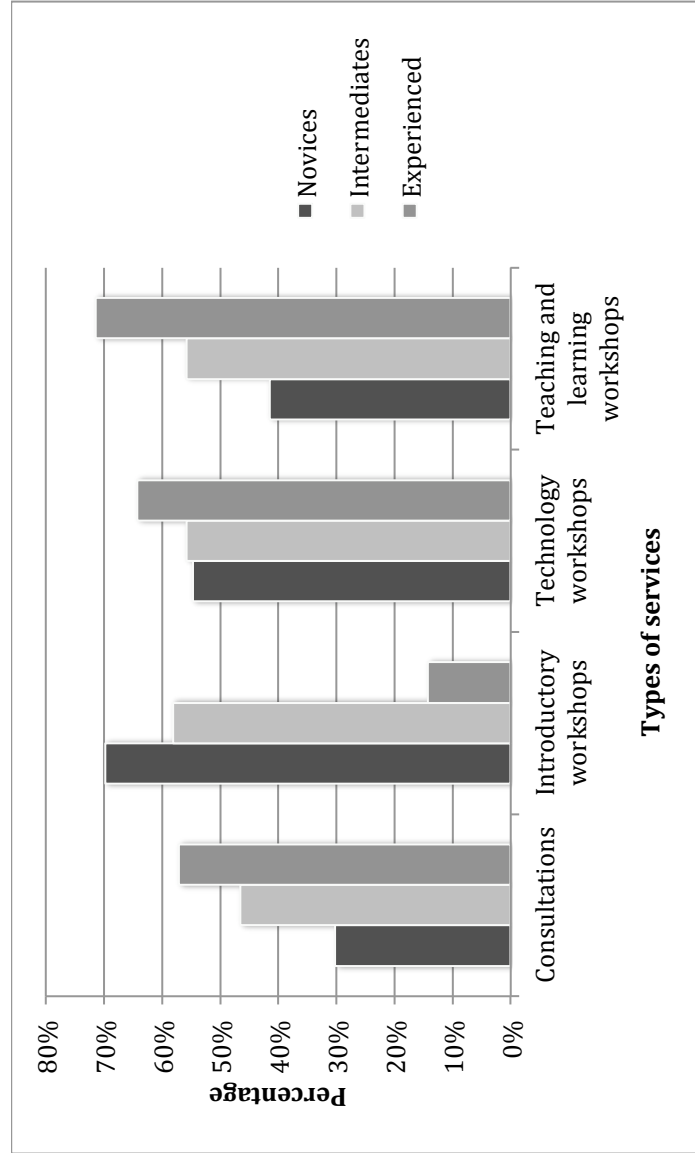
reports a change in learning, that is, change related to their conceptions of teaching or attitudes toward students. Regarding the influence of the changes made by teachers on students and the institution, professors (37%) and lecturers (23%) report this type of change more frequently than do teaching assistants (2%). This can be explained by the fact that the role of teaching assistant is often limited to correcting assignments and exams. When TAs do interact directly with students, they must follow the guidelines set by the person responsible for the course for which they were hired.

Analysis of the data according to number of years of teaching experience (Figure 5) indicates that intermediate teachers report more changes related to learning (34%) and behaviour (92%), and they report an equivalent number of changes to that of experienced teachers concerning the influence of these changes on the institution and on students (intermediate: 32%; experienced: 33%).

Regarding behaviour, we deliberately differentiated changes in behaviour related to teaching practice from changes related to the teachers' commitment to their own educational development. Change in teaching practice was the behaviour change most frequently reported by novice (83%), intermediate (92%) and experienced (89%) teachers. Regarding changes in behaviour related to teachers' commitment to their own educational development, the percentage is higher among intermediate (43%) and novice (25%) faculty members than among their experienced colleagues (18%). Lastly, novice teachers report the lowest percentage of impact of the changes made on the institution and on students (14%) compared with intermediate (32%) and experienced (33%) teachers.

Qualitative Data

Learning Gains

After using the services of the Centre, one third of respondents claim to have a better understanding of their teaching practice. Their learning encompasses knowledge, conceptions of teaching, and attitudes. Regarding the *acquisition of knowledge*, teachers report having a better understanding of their role for supporting student learning, of the institutional context in which they work, particularly in terms of policies and student characteristics, as well as a better understanding of technological tools available for teaching. Most teachers learned new strategies, techniques, or methods for teaching, promoting learning, or assessing their students' learning. In addition, many emphasize having learned the importance of choosing

Figure 4
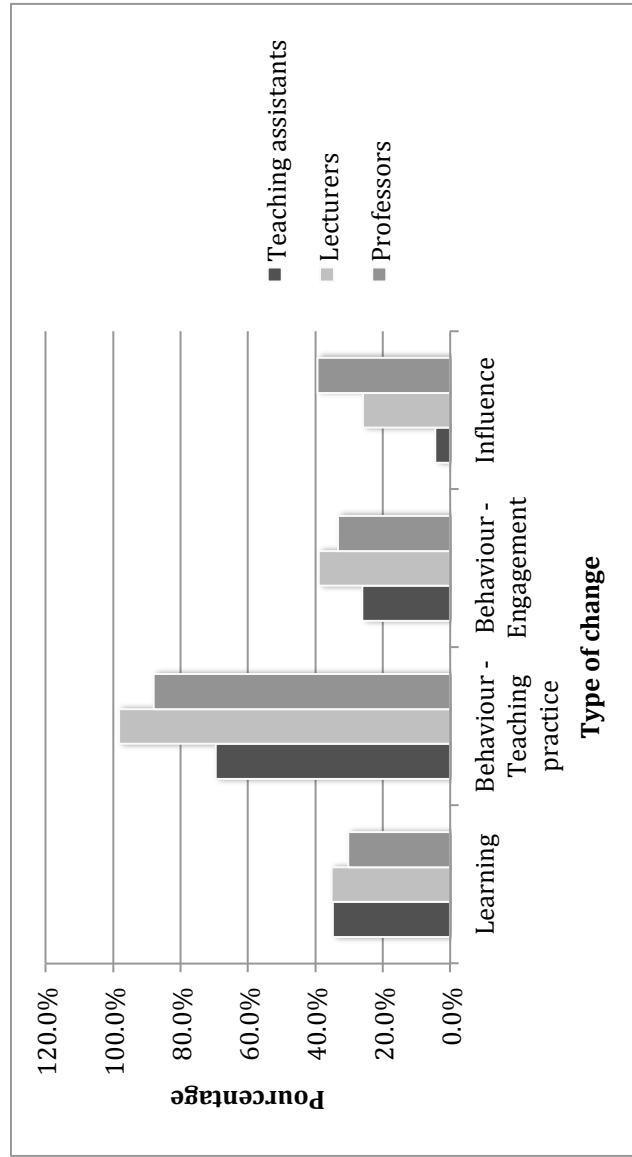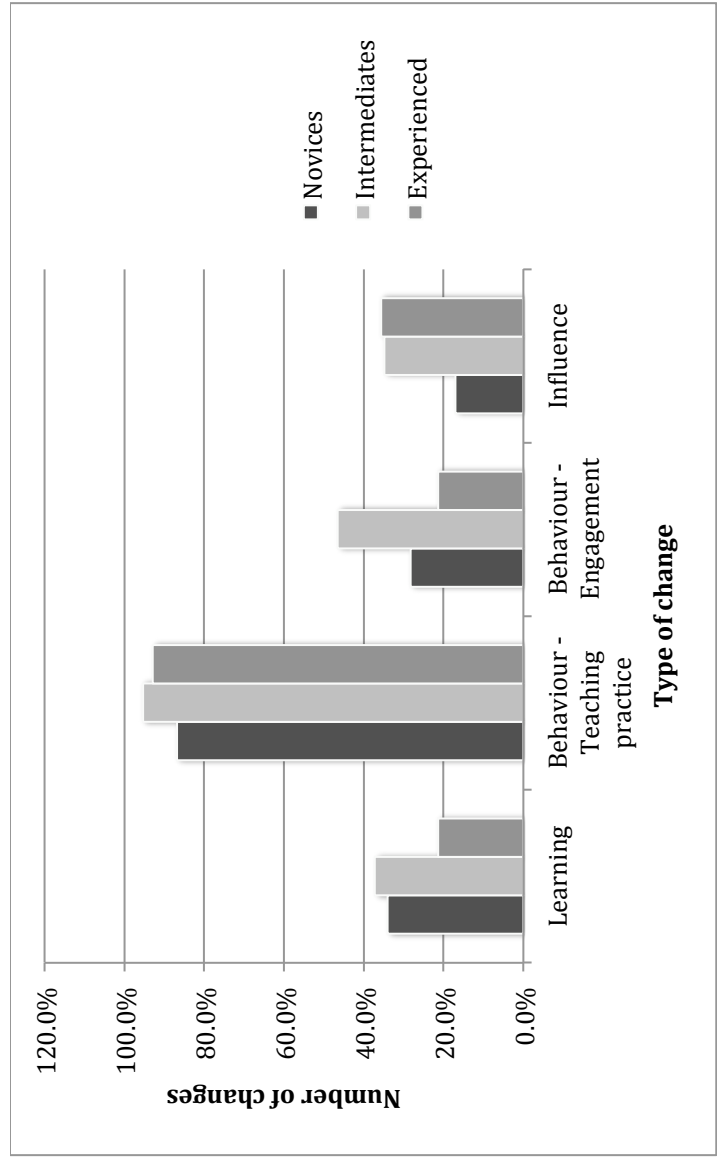**Percentage of Changes Reported in Terms of Respondents' Status**

Figure 5
Percentage of Changes Reported in Terms of Years of Teaching Experience

instructional strategies and assessment methods that are congruent with their learning goals. This notion of congruence is part of the principle of pedagogical alignment, which is a central theme of several educational development workshops. This result indicates that even short workshops may prompt teachers to modify their conceptions of pedagogical planning by concentrating more on the coherence between learning outcomes, instructional strategies, and assessment methods.

Regarding *conceptions of teaching*, about 15% of respondents note a change in the way they conceive teaching and learning, evolving from a teacher-centered to a student-centered approach. The following statements illustrate this change:

> *Before, I tended to see teaching as a simple transmission of knowledge,* and now I see it as providing support. I am more inclined to listen to the students (A.07)

> I see teaching as a dialogue, a team project with students, rather than as a monolithic speech (L.75)

> Teaching is much more than transmitting information to students (P.16)

Teachers reported changes in their *attitudes toward their students and themselves*. Specifically, many respondents underline having developed an attitude of openness toward their students and more confidence in their practice. Teachers attribute these changes to having had the chance to discuss their practice with other teachers or an educational developer. They report feeling more competent and that they can exert better control over their teaching practice. Some report that the services of the Centre have enabled them to validate their practice.

Behaviours Adopted

Apart from learning gains, most of the changes reported by teachers involve the adoption of new behaviours. These changes in behaviour are related either to teaching practice or to a commitment to scholarly teaching. After having used the services of the Centre, most respondents report that they changed their *teaching practices* with respect to course planning, delivery, and assessment. Thus, teachers report putting more effort into planning each class and having changed the way they prepare the entire course, as well as their teaching materials. Those who use technologies report that they use them differently than before. Many respondents report using diversified methods, new instructional strategies, as well as active and interactive strategies in class:

> I started to take five minutes at the start of a class to announce what would be seen and why, and the level of attention and participation increased considerably. Students seemed to better understand why we were doing what we did (A.15)

> Even if I teach large groups, I now use more interactive/partici-pative teaching modes (e.g., think-pair-share exercises; debates around clips from documentaries (L.84)

The assessment of student learning was also an area of reported change. Lecturers and teaching assistants now use evaluation rubrics, and teaching assistants report providing students with more feedback.

The responses of a number of participants also indicate a change in their engagement in scholarly teaching, a possible first step towards SoTL. They claim to be more reflective about their teaching practice and understand their practice better. Professors and lecturers also emphasize that they have a greater interest in pedagogical research. Some lecturers say they read more about teaching in their discipline than before and that they are grounding their practice in the scholarly literature. Some professors report that they participate more often in discussions about pedagogy:

> I am more aware of and know more about the implications of my new role. . . . I have become more reflective about my practice (A.03)

> I have become more reflective about my teaching practice, which, for me, is the source of all other changes (P.16)

Influences Observed

Some teachers noted that changes made to their teaching practice im-pacted their *students*. The professors surveyed find that students are less apprehensive about examinations, that they can link the course content to professional practice, and especially work placements, more easily, and that their grades have improved. Lecturers report that students understand and integrate the course content better. Concerning student behaviour, teachers repeatedly reported better class participation, greater satisfaction with teaching, more sustained attention, deeper engagement in classroom activities, and more regular attendance.

Some teachers also report that the changes they made had repercussions within the *institution*. These respondents report greater sharing with other teachers of teaching-related experiences and difficulties, a better under-standing of the institutional context in which they work, and increased pedagogical leadership in their department.

Overall, the results tend to show that participants in the Centre's activities have noticed changes in their conceptions of teaching and learning and that they have modified their teaching practice. Some have even observed an improvement in their students' learning. Furthermore, some say that they are more engaged in their educational development and in pedagogical activities at the institution. The following section presents the conditions that teachers describe as having facilitated or hindered the implementation of changes reported.

Conditions of Change

From the responses to the survey question "What conditions facilitated or hindered change?" three categories of conditions emerged: teachers, students, and the institutional context. Regarding *conditions related to teachers*, respondents report several aspects that have facilitated change. These include the teachers' mastery of the subject taught, their passion for the subject, their closeness in age to the students, their capacity to question their practice, their enthusiasm about teaching, their time dedicated to teaching, the importance they place on teaching, and their motivation to do their best. The aspects that hinder change for teachers include lack of class preparation time, the fact that it was their first teaching experience, work overload, and, for professors, time dedicated to their research activities and to supervising graduate students.

Students also play a role in change. Their openness to change, their attention in class, the constructive feedback they are offered, and their positive learning results are conditions that facilitate or encourage change. According to teachers, changes are hindered by the heterogeneity of the student population, students' specific expectations about the class, the challenges of managing large groups, and differences in mentality between the students and teacher.

Finally, several conditions related to the *context* of change were mentioned by teachers. Among the conditions facilitating change, teachers mentioned collegiality between teachers, a feeling that trying something new in their teaching is supported, the pedagogical shift initiated by the department or faculty, financial support, accessibility of materials, access to satisfactory technologies, and access to educational development services and support from the Centre. Conversely, conditions hindering change include resistance to change within a department, difficulty adapting change according to the discipline taught, having to deal with student evaluations of one's teaching, lack of technological equipment and support, and lack of pedagogical training and institutional recognition.

Discussion

> Program assessments contribute to the survival, effectiveness,
> and growth of teaching centres at higher education institutions.
> (Schönwetter, Dawson, & Britnell, 2009, p. 1)

Our study was intended to measure the effects of our Centre's activities on teaching practices at our University. Overall, the analyses highlight two very encouraging facts. First, the teachers' responses indicate that they have made changes to their conceptions of teaching and learning "from a monolithic speech to a dialogue" and changed their perception of the role of teacher "from a transmitter of knowledge to a guide." Second, these changes in conceptions seem to have led teachers to modify their practice. While the impact of these changes may not be evident in their students' learning, it is at least evident in their behaviour. Accordingly, they claim that their students participate more in class and that they are more interested or more reflective. These results are encouraging because, as educational developers, we are concerned with the effectiveness of our services, which is measured by the quality of teachers' learning and by the transfer of this learning to practice.

Nonetheless, for a change in practice to occur, certain conditions should be met (Kirkpatrick, 1994), which are not exclusively under our control:

1. The person must want to change.

2. The person must know what to change and how to do so.

3. The person must have a supportive context.

4. The person must be supported by a reward system: financial support for teaching projects, promotions, awards of excellence, etc.

Äkerlind (2007) argues that teachers who decide to use the services of a teaching centre want to make changes to their practice. We can, therefore, assume that teachers participating in our Centre's activities are motivated to advance their practice. The second condition is the one on which we think we can act, because it is on this that most of our consulting and workshop efforts are concentrated: Teachers genuinely want to advance their practice. What remains to be understood are the reasons for making these changes, what can be changed, and how these changes can be accomplished. As for the third condition, although we recognize our role of providing continuous support to teachers in improving their

practice, this role is far from being ours alone, as we have seen from the survey responses related to facilitating conditions and barriers to academic change perceived by teachers. The institution, department, students, and teachers themselves bear part of the responsibility. This finding prompts us to contemplate the limits of our accountability (Gray & Radloff, 2006), to envision a model of collective, rather than individual, responsibility in terms of students' learning (Barr & Tagg, 1995), and to situate the results of the assessment of our services in a broader context of support for teaching and learning.

If our analyses highlight changes in conceptions and in teaching practices, they also show that most teachers are unlikely to pursue their development independently. Only a few teachers claim to read about or discuss pedagogy with colleagues after participating in activities at the Centre. This result is certainly not surprising (Jackson, 1997). According to Cranton (1994), very few centres try to develop teachers' skills at regulating their learning about teaching—namely, setting a goal, adopting means to orient their action toward this goal, and reviewing it to evaluate the benefits on their learning and practice—most often because this skill is taken for granted. This assumption is reflected in the quantity of resources made available to teachers for independent learning. Nonetheless, Cranton (1994) reminds us that we are working within a context where pedagogy is not the primary area of expertise of teachers, where knowledge of the field is learned mainly through practice, and where teaching is not necessarily valued. In this context, if we wish to make teachers more autonomous learners and make self-training our ultimate goal (Brookfield, 1986), the following question arises: What can we put in place to prompt this change in teachers' conception of their educational development?

Outlook: Use of the Results

The assessment of the effects of our educational development activities should have two applications in the short and medium terms. Internally, it will serve as a lever for reflection on our consulting and workshop practices. Externally, it will justify educational development activities to the institution by demonstrating that the resources allocated to these activities yield concrete results.

Internal Use

Monitoring Our Educational Development Support Practices

The positive results of our study have illustrated the contribution of our

approach to the educational development of teachers. This approach has evolved over the years, and the study results encourage us to continue in the same vein. We conceive of educational development as a dynamic and iterative process (Daele & Charlier, 2006) that is informed by research in education, analysis of practice, discussion with peers and that stimulates individual and collective skills development (Bélanger, 2007). In keeping with this definition, we strive to include the following elements in all the educational development activities of the Centre, and particularly in our workshop and consulting activities:

- presentation of theoretical contributions to support the principles and practices that we put forth;

- opportunities for reflection, and

- dialogue in small groups about conceptions, practical experiences, discoveries, and concerns.

We have noticed that teachers are particularly sensitive to the last two elements (Adams, 2009; Lanarès, 2004). Time and again they have told us that the opportunities for reflection and dialogue are what they value the most about our activities.

Activities that seek to increase awareness of research on teaching and that encourage reflection and sharing allow teachers to expand their knowledge of teaching and learning and use this as a basis for making teaching decisions. In our view, this construction of knowledge goes hand in hand with the perpetual goal of transfer to practice. To facilitate this transfer, we endeavour to clarify and demonstrate the strategies that we recommend by using them ourselves in our activities, in addition to offering teachers opportunities to put new knowledge into practice and support and regular feedback in the field.

Robitaille (2007) maintains that five strategies "seem to particularly favour the integration of new teaching methods in the repertoire of teaching practices: presentation of theoretical contributions, demonstrations, practical applications, feedback, and discussions in small groups" (p. 174; translated from original French). Taking into account their limited scope, the results of our study support this affirmation, because our educational development mechanisms include such strategies, and these seem to promote innovative practices among teachers.

If the results of our study have enabled us to see the relevance of our approach to helping improve teaching activities at our University, they have also clarified the fact that few teachers pursue their educational development independently. Kreber and Brook (2001) assert that "the

most successful staff development programmes are likely to be those that assist staff in identifying their own learning needs, in pursuing their own learning goals, and in self-evaluating whether personal goals or objectives were met" (p. 100). How can we expand the scope of educational development beyond the consultation and workshop activities that we currently offer?

We feel that it is important during our initial training sessions—introduction to teaching for new professors, introduction to teaching for new lecturers, and introduction to teaching for new teaching assistants—that we emphasize the ongoing nature of participants' learning and invite them to define their future educational development needs. To this effect, we have decided to propose an educational development framework. This framework can be seen as a guide toward more autonomous development of expertise in teaching in that it allows teachers to have a representation of the requirements of their teaching tasks. In line with our definition of educational development, this framework would rest on teaching competencies that faculty members could develop throughout their career, as well as on a reflective practice approach.

Gauthier, Desbiens, Malo, Martineau, and Simard (1997) contend that research on teaching shows that "teaching involves the application of numerous kinds of knowledge that makes up a type of reservoir from which teachers can draw to meet the demands of classroom situations" (in Brau-Anthony & Jourdain, 2008, p. 195; translated from original French). Being competent means being able to act effectively and confidently in complex, diverse, and changing teaching situations. What are the competencies that come into play in university teaching? The answer to this question could help teachers take charge of their educational development.

To attempt to answer these questions, we have examined various models of educational development proposed in the literature, including

- the qualities of good teaching (Cohen, 1981; Ramsden, Margetson, Martin, & Clark, 1995);

- a competency framework, which was the fruit of a collective endeavour by researchers and teachers interested in improving teaching quality in higher education (AIPU, 1999);

- the 12 roles of teachers in medicine, from content expert to professional role model (Harden & Crosby, 2000);

- the tasks of a clinical teacher (Hesketh et al., 2001);

- teaching skills in higher education (Tigelaar, Dolmans, Wolfhagen, & van der Vleuten, 2004);

- the 20 most important teaching topics for clinical lecturers according to a group of experts in education (McLeod, Meager, Steinert, Schuwirth, & McLeod, 2004); and

- the competencies identified by the UK National Professional Standards Framework for Teaching and Supporting Learning in Higher Education (Fry, 2006; Higher Education Academy, 2006).

Fry's (2006) model seemed most promising because the competencies described apply to teaching in all disciplines and in all contexts. Thus, we decided to use it as the basis for our educational development framework. The competencies are as follows:

1. Designing and planning teaching and learning activities and/or curricula.

2. Teaching and supporting student learning.

3. Assessing and giving feedback to learners.

4. Developing educational environments and providing student support and guidance.

5. Integrating research and professional activities with teaching and learning.

6. Evaluating practice and engaging in continuing educational development.

The educational development framework that we are defining is less a target to attain than a teaching development horizon; it is descriptive rather than prescriptive. This framework will include a map of teaching competencies in higher education and will represent an attempt to answer the following question: What does teaching at a university mean, and what does it require from the teacher? In addition to providing information about the teaching competencies to be developed in higher education, the framework will present a coherent organization of the knowledge, skills, and attitudes to be cultivated in relation to the six competencies above. We

want teachers to be able to see what they have learned and identify areas of future learning that will enhance their teaching abilities. The framework could, thus, serve as a tool for monitoring one's learning.

To further help teachers take ownership of their educational development, the framework will propose an approach for the continuous improvement of practice based on critical reflection. It will also include information on various formal and informal means of ensuring one's teaching development. In short, this framework will enable teachers to better orient, document, and monitor their teaching development by recording it in a file or teaching portfolio.

Clearly, the educational development framework will also provide us with a program vision at our Centre and guide us in planning and organizing our activities (Steinert, 2009). Beyond improvement of teaching quality, what are our precise goals? What are we aiming for in our workshops and consultations? A future study could be a starting point for assessing the impact of our services in terms of transformation not only of practice but also of teaching competencies. Would it be too ambitious to try to describe how teachers have evolved in the development of their teaching competencies?

Monitoring Our Assessment Practice

The focus of our study was to explore teachers' perceptions of what they have transferred from our services to their practice and to assess the extent to which the services offered have contributed to improving teaching. Once we determined that counting the number of participants in activities and noting their level of satisfaction was insufficient to measure the impact of our activities, we felt the need to identify and propose new tools to better document, describe, and orient our work. The questionnaire we designed is the fruit of our first effort in this regard. We have begun to make changes in light of the nature and quality of the responses received.

In addition, we plan to adopt a more continuous, rather than periodic, approach to assessment. We must, consequently, attempt to multiply and diversify our assessment processes, collectively examine potential tools, and determine how to integrate them in our activities. To this end, we have found particularly useful the work of the research group on the typology and assessment of educational development actions (Salmon et al., 2008). Table 2 is adapted from their formalization of assessments of educational development actions or support mechanisms. It provides a framework for the assessment of the activities of our Centre. It takes into account not only the possible objects to assess, as does Kirkpatrick's

(1994) model, but also the goals of the assessment process, the types of data that can be gathered, the various collection tools, the optimal times for assessment, the actors interviewed, and the authorities concerned. It thus allows us to specify the various assessment activities.

Proper integration of assessment is crucial. Admittedly, the collection of relevant data is a lengthy process. How much time to dedicate to this activity is an important question for an educational development centre (Brew, 2002). When assessment is viewed as a separate, onerous task, it is very difficult to carry out. Integrating assessment fully and coherently into our practice is our next challenge.

External Use

To enhance the usefulness of our study, we hope to disseminate the results as broadly as possible. As Bédard and Béchard (2009) maintain, "beyond the various challenges educational developers face, institutions are increasingly seeking to 'quantify' the impact of their activities, or at least to document them. It is important that educational developers record their actions, to develop a positive and explicit perception of their work" (p. 254; translated from original French). To whom should we report the impact of our actions? It is not sufficient to simply want to account for them. We must also ensure that the information conveyed will be understandable and will stimulate reflection and discussion.

The first group targeted by the dissemination of the survey results is the participants. One possibility is to meet with them. The main purpose of this meeting would be to highlight the benefits the teachers derived from our activities, manifested by the reported changes in conceptions, behaviour, and attitudes. In addition, we will share with them the strengths and weaknesses that we have identified in our activities, along with planned improvements. Participants will have an opportunity to comment on our findings and conclusions and to constructively inform our analysis.

The results of our study will also be disseminated to the teaching community and academic authorities who want to ensure service effectiveness. To succeed, a centre must demonstrate that it meets the needs of faculty and that its actions support the broad institutional orientations (Sorcinelli, Austin, Eddy, & Beach, 2006). This communication will, notably, take the form of an annual report on our activities. The report has consistently accounted for our work in a professional manner; our achievements, supported by quantitative and qualitative data; and our actions related to our mission and the orientations of the university.

For our next report, we will examine ways to better account for the

Table 2
Assessment of Educational Development Activities of CEFES by Centre Staff
(adapted from Salmon et al., 2008)

Goals	*Subject*	*Tools*	*Time*	*Respondents*	*Setting*
• Analyze effects • Improve/Monitor • Justify • Document/Report • Advance knowledge on TLCs • Explore • Compare	• Participation • Who? • How many? • Faculty? • Point in career? • Nature of requests • ED Needs • Satisfaction • Learning • Application to practice • Students' reactions/learning • Professional commitment • Involvement of/with institution	• Database • Data sheets for -consultations - workshops • Semi-structured interviews • Discussion groups • Questionnaires -in large groups -by e-mail and online • Results of assessment of teaching before and after working with an educational developer (ED)	• Immediate assessment, following action • Deferred assessment -at the end of the year -after three to five years	• Participants • Non-participants • Educational developers	• Institution • Centre

Table 2
**Assessment of Educational Development Activities of CEFES by Centre Staff (*continued*)
(adapted from Salmon et al., 2008)**

Goals	Subject	Tools (*continued*)	Time	Respondents	Setting
		• Analysis of teaching materials before and after working with an ED • Data gathered by teachers on the impact of changes in practice			

impact of our actions. What influence does our work have on the educational development of teachers? What changes have occurred at the individual, faculty, and institutional levels? We will also try to situate this influence in the context of other services related to teaching and learning, with which we collaborate.

University teaching centres are the third group targeted for dissemination of results, with the goal of advancing knowledge of the assessment of educational development actions in higher education. Our study has already been presented at national and international gatherings. We presented at the annual AIPU Conference in 2008, and we were invited to present at two Canadian universities. Our presentations propose the following to other teaching centres:

- an assessment framework for all educational development activities and an impact scale,

- examples of questions that allow collection of meaningful data, and

- an opportunity for reflection on what coherent planning of service assessment entails.

In an article examining the last three decades of educational development at universities, Knapper (2003) asserts that, if one must judge the success of teaching and learning centres, "we would earn at best an A for effort, but probably a C for impact, with one or two A's for specific accomplishments in particular contexts. This should neither be surprising nor depressing, since we represent a tiny fraction of professional staff in colleges and universities" (p. 7). Weimer (2007) agrees but recognizes our contribution to helping several teachers improve their teaching practice and, hence, enhancing their students' educational experience. She adds that "despite nearly 30 years of faculty development . . . instructional practices have not changed significantly. . . . Teaching is still not valued" (p. 6).

These findings seem somewhat defeatist considering the number of teaching projects we are called upon to support. In our context and for the University overall, it is certainly possible to detect an increase in the importance placed on teaching and an evolution in conceptions of teaching and learning. First of all, we have noticed that, in recent years, many teaching teams, supported by their administration, have not hesitated to take bold steps in their teaching and to update their educational practices. To some extent, programs are being transformed, new course structures are being introduced, innovative approaches are being put in place, and

new tools are being integrated into programs to prompt more significant student learning and boost professional skills development. The Centre has collaborated on several of these pedagogical projects.

Next, we have observed in our introduction to university teaching workshops that new professors and lecturers are less focused on disciplinary content than their predecessors were and are already showing an interest in more student-centered approaches. Similarly, we have recently observed a noticeable increase in the number of teachers that participate in our activities. For example, about 800 faculty members took part in the Centre's activities in the fall of 2009, which is more than double the number of participants in previous fall sessions. Given how little time teachers have to dedicate to their educational development, this increase seems highly significant.

In addition, the vice-rector of academic affairs has clearly encouraged our endeavours and projects. This encouragement is manifested concretely in his participation in the Centre's activities, his financial support for promising projects, and the importance he places on teaching excellence awards. Teachers seem to appreciate this recognition of their investment in teaching.

Finally, if centres perceive themselves as the sole entities responsible for improving teaching practice in an institution, they may become discouraged. When it is acknowledged that improvement of teaching practices is a shared responsibility, the anticipated impact becomes more attainable.

An investigation like ours invariably raises the question of the kind of impact we are seeking to have as a centre. Gray and Radloff (2008) recommend that TLCs adopt realistic and achievable work goals for which they can gather information and produce concrete and positive results, consistent with their mandates. In addition, they suggest that the word "impact" be used prudently; they recommend instead the term "effectiveness." "Impact" tends to create overly high expectations among both TLCs and the academic administration. Is the word too strong? A more important exercise is precisely to define the impact targeted and measured. Our goal was to determine the benefits of the actions undertaken by the Centre to support teachers' educational development.

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