

Professors' Perceived Barriers and Incentives for Teaching Improvement

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Abstract

Continuous engagement in teaching improvement is required if professors are to gain the essential knowledge base for effective teaching in ever changing contexts. However, research suggests that professors are not always willing to engage in teaching improvement activities and thus may employ less effective teaching methods that can, in turn, negatively impact student learning. The purpose of this study was to investigate which factors professors perceived as being hindering or motivating to engage in teaching improvement activities. Data were collected from 146 professors from a Canadian research-intensive university. Participants responded to two open-ended questions comprising a subset of a larger survey on engagement in teaching improvement. Specifically, the questions elicited professors' perceived barriers and incentives for teaching improvement. Lack of time and a university culture that was not conducive to teaching were identified as the most significant barriers. Greater recognition for teaching and creating a reward system for excellence in teaching were highlighted as the most desirable incentives. Moreover, a comparison was made between tenured and non-tenured participants with respect to perceptions of incentives and barriers. A university culture that is not conducive to teaching was perceived as more hindering for teaching improvement for non-tenured professors. Findings are insightful for stakeholders, in particular educational developers and policy makers to develop and implement strategies to remove barriers and reinforce motivating factors for teaching development.

Keywords: teaching improvement, incentives, barriers, higher education, tenure status

1. Introduction

1.1 What is the Problem?

Professors can play a significant role in guiding student learning in higher education by designing conducive learning environments and using instructional strategies that support the intended learning (Saroyan & Amundsen, 2004). From a social constructivist perspective, learning activities and environments should enable students to interact with the instructor and other students to construct new knowledge (O'Donnell, 2011). The modeling, coaching, and scaffolding that is done in the course of instruction assist students in their learning processes (Collins, 2006; O'Donnell, 2011). This necessitates that professors know when and how to use appropriate pedagogies to foster intended learning (Guskey, 2000).

To gain such specialized pedagogical knowledge normally requires that professors participate in teaching development and improvement activities. However, it has been asserted that many professors are not sufficiently concerned and are reluctant or even resistant to improving their teaching and employing innovative strategies in their teaching (Berman & Skeff, 1988; Fink, 2003; McCrickerd, 2012; Radloff, 2008; Sirum, Madigan, & Kilionsky, 2009). Employing ineffective or less effective teaching methods could have detrimental consequences on student learning. It could reduce motivation and increase negative attitudes towards learning, both of which can result in lower achievement (Brown & Atkins, 2002; Biggs, 1999). There is also a possibility that the willingness to pay greater attention to teaching development may be related to the career stage. For instance, the pressure on research productivity on non-tenured professors may inhibit them from dedicating time to teaching improvement activities (Brownell & Tanner, 2012).

With respect to engaging in teaching development activities for more effective teaching, it is essential to understand motivational drivers for wanting to improve teaching. The present study aimed to explore these factors. More specifically, it explored professors' perceptions of inhibiting and motivating factors for participating in teaching development activities and potential differences between tenured and non-tenured faculty in these perceptions.

1.2 Why is Teaching Improvement Important?

Each discipline has a vast knowledge base and within the context of university teaching, this includes knowledge of pedagogies and their appropriate application in teaching (Guskey, 2000; Shulman, 1987). In most postsecondary contexts, faculty are normally expected to have an advanced degree in their discipline but they are not required to have any pedagogical training prior to their appointment. Moreover, their participation in professional development activities that focus on teaching during their appointment is typically not a required condition of tenure or promotion.

An adequate sense of pedagogy will have consequences on the ability of professors to provide students with optimal and motivating learning environments. Effective teaching can stimulate and enhance learning while ineffective teaching can be detrimental to student learning (Brown & Atkins, 2002). Effective teaching and designing activities that foster higher level cognitive processes and critical thinking can prompt active participation and stimulate and engage students who are considered passive learners (Biggs, 1999). These require specialized knowledge that may not be readily available to professors unless they acquire it through engaging in teaching development activities. Additionally, the diversity in disciplines and their distinct knowledge base (Becher, 1994) requires knowing about pedagogical approaches that are particular to the subject matter and that extend beyond those that are general and appropriate across the board (Hounsell, 1984; Shulman, 1987). These observations underscore the importance of teaching development and improvement for professors if they are to successfully meet the demands of effective teaching in their discipline (Van Eekelen, Boshuizen, & Vermunt, 2005).

1.3 Engagement in the Improvement of Teaching

1.3.1 Teaching Improvement Activities

Activities that fit under the general umbrella of teaching improvement include self-directed learning, formal professional development initiatives, professional learning communities, and communities of practice (Cafarella & Zinn, 1999; Hill, 2012; Hoadley, 2012). Self-directed learning encompasses the activities professors plan or implement on their own. Learning by teaching and reflection, including reading materials for lectures, revising previous courses, and designing new courses as well as reading about teaching improvement are examples of self-directed learning. Formal professional development comprises learning that takes place in meetings, workshops, and conferences at the local, regional, national or international levels. Learning communities and communities of practice are effective contexts in which to enhance faculty skills and knowledge,

particularly with respect to promoting different instructional methods and improving teaching (Carnell, 2007; Cox, 2006; Eib & Miller, 2006). This form of collective learning has the added advantage of learning from peers, mediated through supportive leadership (Hill, 2012; Hoadley, 2012).

1.3.2 *Outcome of Teaching Improvement Activities*

Although some teaching improvement interventions have failed to make sustained changes in teaching practice and in enhancing students' learning, there exist also examples of successful experiences. A well-designed and thoughtfully planned workshop can deepen instructors' knowledge and develop their practice (Guskey, 2000; Ko, Wallhead & Ward, 2006; McAlpine & Saroyan, 2004; McAlpine, Saroyan, & Winer, 2004), can foster coherence between learning activities, and can facilitate connecting theory to practice, thereby engaging participants in active learning (Birman, Desimone, Porter & Garet, 2000; Garet, Porter, Desimone, Birman, & Yoon, 2001). The context, the duration of the intervention, and the target population are important design elements that can have an impact on the success or failure of professional development activities. For instance, a short, one-day event is likely not to have a long-term effect on target participants. In contrast, there are examples of multiple-day events with successful and long-term change (Saroyan & Amundsen, 2004; Sunal *et al.*, 2001).

Recent research has revealed that learning communities and communities of practice can enhance and promote different instructional methods or improvement of teaching among university professors. For instance, in a study carried out in Calgary, researchers promoted effective teaching and delivery of courses in distance programs through communities of practice (Eib & Miller, 2006). Before the study began, there were only a few professors with expertise and willingness to engage in online learning and distance education. The researchers designed an 'institute' focusing on enhancing effective teaching. Professors shared their questions and concerns about teaching and implementing new technologies and discussed them in the frequent events that were held by the researchers. Five years after implementing the institute, in addition to enhancing effective teaching, a big growth was observed in the number of professors offering online courses. In another study, scholarship of teaching and learning and reflective practice were fostered in learning communities for professors affiliated with science, technology, engineering and mathematics disciplines in Howard University, USA (Smith *et al.*, 2008).

Despite the unquestionable importance of engaging in activities related to the improvement of teaching, not all professors are concerned about, seek, or welcome such opportunities (Fink, 2003; McCrickerd, 2012). The willingness and motivation to participate in such activities or not are associated with a number of factors discussed in the next section.

1.3.3 *Barriers for Teaching Improvement*

There is a body of literature on barriers that faculty experience with respect to the improvement of teaching. Time constraint is reported as one of the main barriers for the improvement of teaching in Arts, Biology, and Science disciplines (Brownell & Tanner, 2012; Lind, 2007; Sunal *et al.*, 2001). Competing demands between research, teaching and service, especially in research-intensive universities, limit faculty members' time and their opportunity to focus on teaching excellence (Brownell & Tanner, 2012). Conflicts related to work priorities are also considered an obstacle for engagement in teaching improvement (Radloff, 2008). Academic workload is generally intense (Fink, 2003) and faculty members have to make choices on how to use their time. The great importance placed on research productivity for tenure and promotion lead faculty members, especially junior faculty, to assign higher value to research and spend most of their time on research activities (Radloff, 2008).

Lack of incentives for quality teaching, and the higher value that institutions attribute to research are also viewed as barriers for the improvement of teaching in Arts, Biology, Education,

Engineering, and Social Policy (Brownell & Tanner, 2012; Frost & Teodorescu, 2001; Lind, 2007; Radloff, 2008; Santo, Engstrom, Reetz, Schweinle & Reed, 2009; Serow, Brawner, & Demery, 1999; Serow, Van Dyk, McComb & Harrold, 2002; Stenfors-Hayes, Weurlander, Dahlgren & Hult, 2010; Tagg, 2012; Young, 2006). Most incentives for promotion and remuneration are heavily based on research productivity and teaching excellence is claimed to be second in importance for obtaining and granting tenure (Hardre & Cox, 2009; Radloff, 2008). Generally, teaching excellence appears to have powerful rivals such as research productivity and service activities and is not sufficiently rewarded (Young, 2006). As a way of underscoring this difference, Radloff (2008) writes, 'we continue to talk of research in terms of opportunity and teaching in terms of load' (p. 5). Various rewards and incentives for success in research further emphasize that teaching excellence is not sufficiently taken into account in promotion and tenure decisions (Young, 2006). An unintended consequence of unfavourable discourse and symbolic actions may be that faculty who prioritize teaching over research are taking a risk and, thereby, reducing their chance of promotion. However, in contrast to faculty members who do not pursue teaching excellence and stick to minimum teaching competence, there are faculty who consciously make a choice to focus on improving the quality of their teaching (Ballantyne, Bain & Packer, 1999).

It has been asserted that the best way to motivate professors to improve their teaching is by creating an equitable system of rewards for excellence and effectiveness in teaching (Gibbs, 1995; Olmesdahl, 1997; Young, 2006). Empirical studies have also affirmed the positive impact of teaching awards on enhancing the quality of teaching and recognition of teaching in higher education institutions (Brawer, Steinert, St-Cyr, Watters, & Wood-Dauphinee, 2006; Sorcinelli, & Davis, 1996). Conversely, lack of training, and incentives, and university policies are deemed to be salient barriers, especially for pre-tenured faculty members who experience the pressure of demonstrating research productivity for receiving tenure (Brownell & Tanner, 2012; Sunal *et al.*, 2001). Institutional recognition and collegial support seem to be considered as incentives and essential requirement for the improvement of teaching (Feldman & Paulsen, 1999; Knight & Trowler, 2000).

1.3.4 *Incentives for Teaching Improvement*

As mentioned above, support and recognition for teaching excellence in the workplace are motivators for engaging in teaching improvement. Feldman and Paulsen (1999) emphasize the importance of supportive teaching culture for stimulating motivation for teaching excellence and teaching improvement. In such an environment, teaching is considered as important as research; a vision that is communicated when hiring new faculty members and one that is reflected in tenure and promotion policies. Teaching is encouraged within professional learning communities among faculty members, chairs and administrative staff. Often, there is a unit especially established to promote effective teaching. This unit provides faculty with various resources and programs such as consultation, training, conferences and grants for quality teaching (Carnell, 2007; Feldman & Paulson, 1999). Other incentives include collaboration and dialogue with colleagues and peers, especially those who are committed in teaching (Stenfors-Hayes *et al.*, 2010). Recognition for engaging in improvement of teaching and the availability of support systems at the workplace (e.g., funds, and resources) (Caffarella & Zinn, 1999; Frost & Teodorescu, 2001; Lind, 2007) are seen as supportive factors. Personal interest in teaching, need for constant development, and enhancing student learning are also supportive factors discussed in the literature (Stenfors-Hayes *et al.*, 2010).

Some of the above reviewed studies have an empirical basis and are focused on specific disciplines (e.g., Lind, 2007; Serow *et al.*, 1999; Stenfors-Hayes *et al.*, 2010; Sunal *et al.*, 2001; Young, 2006). Others are not empirical (e.g., Brownell & Tanner, 2012; Feldman & Paulson, 1999; Radloff, 2008; Tagg, 2012) even though they forward an opinion about either barriers or supports (e.g., Brownell & Tanner, 2012; Young, 2006). Taken together, they do not provide a solid empirical research base on both incentives and barriers for teaching improvement from participants'

points of view in research-intensive institutions and across all disciplines. The present study addressed this gap.

1.3.5 *Difference between Tenured and Non-tenured Faculty Members*

Differences between tenured and non-tenured professors' perceptions with respect to teaching improvement have rarely been investigated to date. Previous research has looked at this group differences in other contexts. For instance, studies have compared perceptions of tenured and pre-tenured professors toward grant writing (Boyer & Cockriel, 1998; Walden & Bryan, 2010) and results indicate that there are group differences in perceptions of both barriers and supports. For instance, consideration of tenure and promotion is a more significant motivator for pre-tenured faculty members compared to tenured faculty members (Boyer & Cockriel, 1998). In contrast, tenured professors, compared to their non-tenured counterparts, view the heavy teaching load as a more significant barrier (Walden & Bryan, 2010). Given that teaching is taken into account in the tenure process, it could be hypothesized that performing well in teaching should be a significant motivator for pre-tenured faculty members. On the other hand, the higher value that institutions attribute to research, compared to teaching (Young, 2006), can result in pre-tenured faculty members dedicating most of their time to research activities and in some cases, at the expense of working towards teaching excellence (Brownell & Tanner, 2012; Radloff, 2008). It is likely that perceptions of barriers against and support for participating in teaching development activities will vary. For example, if as asserted, research performance is given higher importance in the granting of tenure (Hardre & Cox, 2009), a pre-tenured professor may rightly perceive research as being more meritorious than teaching and on that basis, decide that investing time toward teaching development is less of a priority than spending time on research related activities. This emphasis on research can distract professors from focusing on teaching (Frost & Teodorescu, 2001).

In summary, research suggests that student learning and their active engagement can be enhanced by appropriate and effective teaching approaches and pedagogies. Learning about these and discipline specific pedagogies will typically be achieved through participation in development activities targeted for teaching improvement. However, faculty perceptions and their career stage may motivate or hinder their participation in teaching development activities. This study was carried out to further explore related perceptions.

1.4 Research Questions

The following two specific research questions guided the study: a) What are professors' perceptions of motivating and inhibiting factors for engaging in professional development to improve their teaching?, and b) Are there any differences between pre-tenured and tenured faculty in perceptions of motivating and inhibiting factors with regard to engaging in teaching improvement activities?

2. Methodology

The survey design was deemed appropriate for this study as the aim was to collect faculty opinions and a survey can provide the researcher with individual knowledge, feelings, values, and perceived behaviours (Fink, 2008). A self-administrated questionnaire was chosen as the mean for collecting data.

2.1 Context and Participants

The research site was a research-intensive university in Eastern Canada. Participants were faculty members representing different disciplines and varying in rank and experience. The data collection

was conducted in June and October 2013, and March 2014 following the approval by the institution's Research Ethics Board.

2.2 Sample Size and Sampling Procedures

Data were collected from 146 professors. The sample was selected by means of a general invitation email, sent on behalf of the first author and principal researcher to Faculties and departments and the University Teaching and Learning Services. All participants were presented with basic information about the study prior to their participation. They agreed to participate in the study by signing the consent form and subsequently filled out a questionnaire that was developed for this study.

2.3 The Questionnaire

The survey prepared for the present study consisted of 14 questions. The questions elicited demographic information, participants' record of engagement in different activities related to teaching improvement, the proportion of time they allocated to activities related to research, teaching and service, and their perceptions of barriers against and support for teaching improvement. In this paper, we report the results related to two open-ended questions asking specifically whether there were any a) incentives that might motivate faculty members to engage in teaching improvement activities, and b) barriers that might prevent them from engaging in teaching improvement activities.

2.4 Pilot Testing

The questionnaire was pilot tested before it was used in the actual data gathering. As recommended by Fink (2008), the pilot study participants (n=3) were similar to the targeted sample and were drawn from the faculty members of the same University. The main focus of the pilot was to test the clarity and face validity of the questions. Necessary revisions were made following to the pilot testing.

2.5 Analysis

The data source comprised responses to the two open-ended questions in the questionnaire. Thematic network analysis (Attride-Stirling, 2001) was used to extract the salient themes as well as to structure and depict the themes. The distinguishing feature of the thematic network analysis is the use of web illustration to present the main themes of the text. The analysis was carried out in five steps using the MAXQDA software for qualitative analysis. First, responses to the two open-ended questions were segmented. The response of each participant for each question was considered as one segment. Second, the basic themes representing each segment were identified. Third, the basic themes were arranged and categorized into organizing and global themes. Organizing themes are the middle-order themes that cluster together the basic themes with similar ideas. Global themes are the higher order themes that encompass the principal ideas in the data. Thematic networks were then illustrated in the fourth step using the global, organizing and basic themes. Finally the networks were verified and refined following the discussion between two independent judges who had coded ninety percent of the data with 84% agreement.

3. Results

3.1 Demographic Information

The University where the study was conducted has 1674 tenured and tenure-stream faculty members. A total number of 146 faculty members, which is about 9% of all the ranked faculty

population, agreed to participate in this study by signing the consent form and responding to the questionnaire. Participants represented different disciplines and varied in rank and experience. Tables 1, 2 and 3 comprise information about participants' disciplines, tenure status, and years of experience.

Table 1. Frequency table of disciplines to which participants are affiliated

Discipline	<i>Frequency</i>
Natural Sciences and Engineering	36
Social Sciences and Humanities	52
Health Sciences	58
Total	146

Table 2. Participants' tenure status

Rank	<i>Frequency</i>	<i>Percent</i>
Non-tenured	81	55.5
Tenured	64	43.8
Total valid	145	99.3
Missing	1	.7
Total	146	100

Table 3. Mean and standard deviation for participants' years of experience by group

Teaching experience	<i>M</i>	<i>SD</i>	<i>N</i>
Tenured	22.44	12.80	62
Non-tenured	11.95	10.24	78
All participants	16.60	12.54	140

3.2 Supports and Barriers for the Improvement of Teaching

The results concerning professors' perceptions of motivating and inhibiting factors (i.e., incentives and barriers) for professional development to improve teaching are reported in the following sections.

3.2.1 Perceptions of Incentives

Figure 1 displays the network of categories of incentives for improvement of teaching derived from the raw data. The percentage of each global theme is included in Table 4. The explanation of each theme is presented in the following paragraphs.

Table 4. Perceived incentives

Themes	Frequency (%)
Greater value for teaching	24%
Greater recognition and appreciation	
More professional rewards or endowments	
Teaching improvement activities	15.8%
Self-motivation	14.5%
Time release	13.3%
Teaching evaluation	5.6%

Greater value for teaching. This global theme encompasses two organizing categories: Greater recognition and appreciation and more professional rewards or endowments.

Greater recognition and appreciation. Participants acknowledged that greater recognition and appreciation from the institution, colleagues and public opinion would be a potential incentive to engage in the improvement of teaching. The following excerpt is an example of this category.

P97: The biggest and best [incentive] would be colleagues' and institutional recognition. That will require a change in the institution to recognize excellent teaching as being just as important as excellent research although this is often stated as being the case; the simple fact is that there is still a slant towards research. For example, we allow people with prestigious awards to 'buy-out' their teaching. What's the message that this is sending?

More professional reward or endowment. Participants stated that creating rewards and incentives for teaching well and the improvement of teaching can significantly impact the value of and the engagement in activities related to the improvement of teaching. The following excerpts include examples of this theme.

P138: If professional advancement and pay were tied more heavily to teaching and teaching improvement; [this would be an incentive].

P102: If this time [engaging in teaching and teaching improvement activities] is credited towards merit ranking.

P132: Most incentives are on research. Any incentive would be helpful. I would gladly spend more time engaging in teaching improvement, but especially as a young non-tenured professor, it is clear that priorities are research, grad students, grant writing, etc...

Teaching improvement activities. Participants expressed their concerns about the content, instructional methods, outcomes, timing and the cost of teaching improvement activities. They emphasized that addressing these concerns would further motivate them to engage in the activities. In their opinion, the teaching activities should be tailored to different disciplines and be facilitated by experts in disciplines. Demonstrating the true benefits of teaching improvement activities by providing research evidence about effectiveness of these activities was considered a potential incentive. Finally, more flexible timing of the workshops and reduction in the cost of the workshops were mentioned as incentives. The following excerpts are examples of this theme.

P109: *The activities would have to be oriented toward my subject.*

P23: *Working with expert teachers in a coaching scenario [is an incentive].*

P48: *If they [teaching improvement activities] have an actual reputation of being useful.*

P109: *If I felt that they would genuinely improve the course.*

P130: *More flexible schedules for workshops; they are often on days when I am in a clinical setting.*

Self-motivation. The motivation to improve teaching, in addition to being extrinsic, had an intrinsic value. Participants reported that they were rewarded by facilitating student learning and by their enjoyment and success. They also referred to their own personal satisfaction, and intrinsic motivation. The following excerpts are examples for this category.

P21: *Incentives are mainly personal. I want to feel competent teaching. I want to feel like the students enjoyed the classes and learned new things.*

P7: *There is nothing extrinsic that would motivate me; my motivation to be the best teacher I can be is purely intrinsic and stems from having been a secondary school teacher for years prior to starting at this University.*

P131: *Most of the incentives to improve my teaching skills are self-motivated. I do not really need external encouragement or incentives.*

P136: *The pleasure of giving a good class and the good feeling of seeing students learning new concepts.*

P117: *In fact I have an intrinsic desire to teach effectively, as to do other tasks well.*

Time release. Being given more time to improve teaching was considered to be an incentive for engaging in the improvement of teaching. Similarly, reduced course load and service obligations were mentioned as potential incentives because they could free up more time which could then be dedicated to the improvement of teaching. The following excerpts are provided as elaboration.

P119: *Having more protected time to commit to improvement activities.*

P110: *If I actually received a teaching reduction, I would put the time to improve the course I am teaching*

P134: *I have done that in the past especially when I first started at this university, but now no, it is such a demand for my time that although I see workshops I want to take I can't do now because of other commitments.*

P88: *Basically there is too much service work.*

Teaching evaluation. Participants in the current study considered teaching evaluation as an incentive for the improvement of teaching. Receiving a positive evaluation and the existence of a more effective teaching evaluation system were the two organizing themes for this global category. The following excerpts include examples for this category.

P124: *Course evaluations by students are also motivating. It is very positive to get good reviews.*

P115: *Clearly defined performance metrics other than student evaluations [is an incentive].*

P24: *Better metrics, peer evaluation or conceptual inventory test to supplement the student evaluations or reviews.*

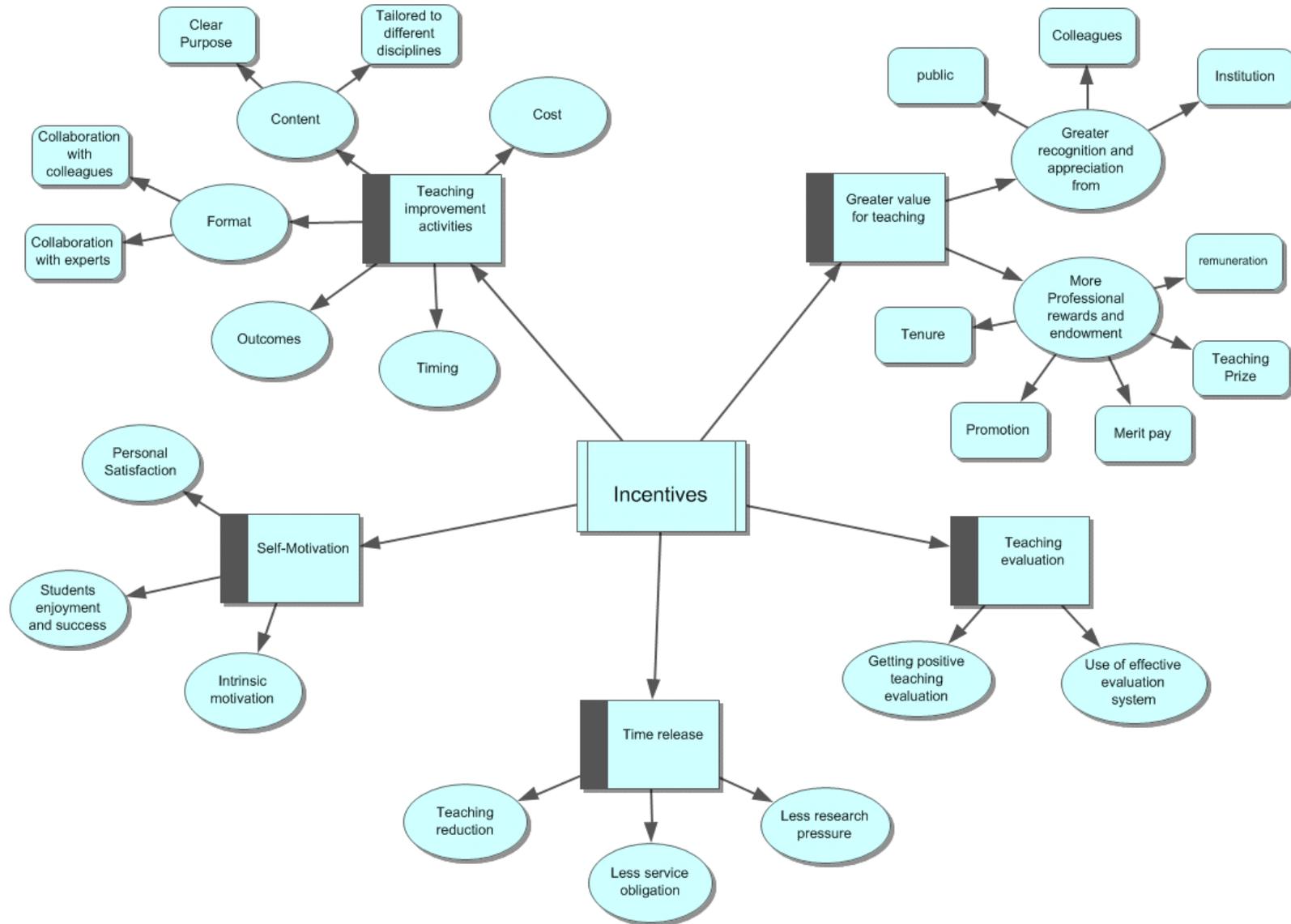


Figure 1. Thematic network of participants' perceived incentives

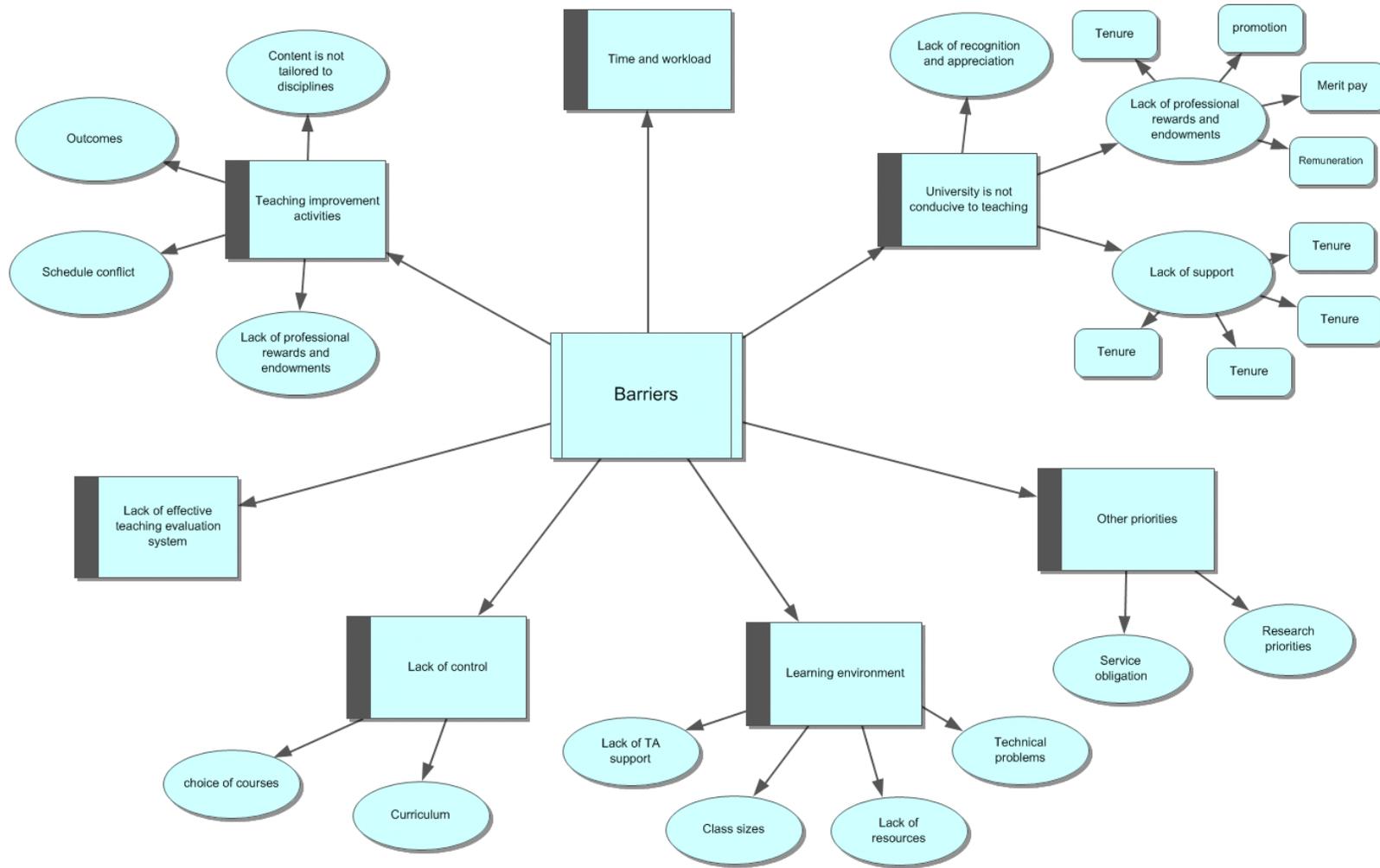


Figure 2. Thematic network of participants' perceived barriers

3.2.2 Perceptions of Barriers

Figure 2 displays the network of categories of barriers for improvement of teaching. The percentage of each global category is presented in Table 5. Interestingly, some of the barriers are also mentioned as incentives. This pattern was also found in another study that investigated barriers and incentives medical teachers perceived for teaching improvement (Stenfors-Hayes *et al.*, 2010).

Table 5. Perceived barriers: categories

Themes	Frequency (%)
Time and workload	32.9%
University is not conducive to teaching	15.6%
Lack of recognition and appreciation for teaching and teaching development	
Lack of professional rewards and incentives for teaching	
Lack of support	
Effectiveness of teaching development activities	13.5%
Other priorities	8.1%
Learning environment	7.6%
Lack of control	1.6%
Lack of effective teaching evaluation system	1.1%

Time and workload. Lack of time and heavy workload were the most frequently mentioned barriers for the improvement of teaching with more than 30% of the participants perceiving these as barriers.

P131: *The biggest barrier for me is time or lack of time! I wish I could carve out time to spend exclusively on improving my teaching/learning approaches, but that time always seems to get away from me.*

P114: *I don't have very much free time to dedicate to teaching improvement activities.*

University is not conducive to teaching. This global category comprises the three following organizing categories: Lack of recognition and appreciation, lack of professional rewards and incentives, and lack of support.

Lack of recognition and appreciation. Participants considered that lack of recognition and appreciation for teaching and teaching development from departments or administration as barriers for the improvement of teaching. The following excerpts are provided as elaboration.

P68: *Official, consistent and explicit devaluing of the main component of essential curriculum; and of the people who are actively engaged in quality and innovation.*

P57: *As an indicator of academic success, teaching is not valued nearly as high as research. Everyone knows that, everyone complains about it, but no one does anything to change it.*

P57: *The problem is institutional and cultural. Unless the university genuinely committs to valuing undergraduate education this will not change. Excellent teachers will contunie to forsake pedagogical growth in persuit of research outcomes, and students will continue to suffer.*

P53: *When the reality of already spending extra time from what I am paid for just to correct and offer appropriate support to students is not taken into consideration and that expectation is that I do teaching improvement activities on my own time...*

P123: *The university is currently de-emphasizing teaching, so I must as well.*

Lack of professional rewards and incentives. In the current study, the lack of rewards and incentives for teaching were viewed as significant barriers for engagement in teaching improvement. Participants believed that excellence in teaching should be tied to promotion, tenure, and merit and financial rewards. The following excerpts include examples for this theme.

P57: *All professors are eventually socialized to prioritize research. This is reinforced, for example, through institutional incentives to 'buy yourself out' of teaching credits, for example by obtaining external research funding. There is no reverse incentive, for example to buy yourself out of research expectations by providing excellent teaching outcomes.*

P116: *Lack of incentives and lack of reward (e.g., perceived importance in merit review).*

Lack of support. Participants stated that lack of support from the institution for efforts put into improving teaching is a barrier for further engagement in teaching improvement. The following excerpt is the example of this theme.

P55: *The biggest de-motivator for me is when I notice that the institution does not support my efforts... I put a lot of effort into providing a high quality product, so when the institution doesn't follow through in supporting the quality controls in place, it feels like a waste of my effort.*

Effectiveness of teaching development activities. The outcome and impact of teaching improvement activities was considered a barrier. Participants mentioned that lack of evidence for the effectiveness of teaching development workshops contributes to this sense of barrier. Moreover, some mentioned that they have negative experiences of attending workshops and they did not find workshops insightful. Participants also referred to the content of teaching improvement activities and considered their general focus (as opposed to them being tailored to the discipline) as a barrier. Finally, the timing of the workshops was considered a barrier, especially for those working in clinical settings.

P109: *Having to accept the ideologies of the workshop designers whose background is in Eductaion, not in Art and humanities.*

P85: *In general, I find them lacking in depth. They focus on generalities rather than specific contexts.*

P122: *No guarantee that they offer significant improvement over present practices. Lack of easily measureable outcomes.*

P72: *Workshops are usually offered during working hours. I have clinical and service obligations that make that difficult.*

Other priorities. Participants stated that research and service have higher priorities compared to teaching improvement.

P110: *I cannot take time away from research or service to improve my teaching. Therefore, I have to teach one fewer course one year in order to improve my remaining courses.*

P124: *Partly caused by the other demands (research and service).*

Learning environment. This general category comprised statements related to the learning environment and included aspects such as the lack of TA support, technical problems in classrooms, class size, and lack of resources.

Lack of control. Participants referred to that lack of control over course assignments and over the curriculum as demotivating factors. Although this category comprises a small percentage of the data, it provides interesting insight and is worth mentioning.

P24: *Also, lack of choice in what course I am assigned to teach (or unpredictability of it) is demotivating.*

P40: *Top down decision making regarding courseware.*

P49: *I must meet OIIQ criteria (nursing board) and school qualification, which can be a barrier to actual students needs.*

Lack of effective teaching evaluation. Lack of meaningful teaching activities beyond student evaluation was viewed as a barrier for the improvement of teaching.

P68: *Limited range of indicators of teaching effectiveness and excess focus on course evaluations (without any contextual analysis) for promotion/value.*

3.3 Difference between Tenured and Non-tenured Professors

The second research question addressed differences between tenured and non-tenured professors with respect to their perceptions of motivating and inhibiting factors and what they perceived as corresponding barriers and incentives. Tables 6 and 7 include comparisons between the categories of incentives and barriers as perceived by non-tenured and tenured professors. As can be observed, both groups referred to similar incentives with balanced frequencies. The significant difference had to do with university culture ($t = 2.23$, $df = 113$, $p = 0.027$); 28.39% of non-tenured faculty perceived this as a barrier as compared to 9.37% of tenured participants.

Table 6. Perceived incentives: comparison between non-tenured and tenured participants

Themes	Tenured	Non-tenured
Greater value for teaching	23.43%	28.39%
Greater recognition and appreciation		
More professional rewards or incentives		
Teaching improvement activities	12.50%	20.98%
Intrinsic motivation	17.18%	13.58%
Time release	12.50%	16.04%
Teaching evaluation	6.25%	6.17%

Table 7. Perceived barriers: comparison between non-tenured and tenured participants

Themes	<i>Tenured</i>	<i>Non-tenured</i>
Time and workload	48.43%	39.50%
University is not conducive to teaching	9.37%	28.39%
Lack of recognition and appreciation for teaching and teaching development		
Lack of professional rewards and incentives for teaching		
Lack of support		
Effectiveness of teaching development activities	12.50%	19.75%
Other priorities	12.50%	7.40%
Context	12.50%	7.40%
Lack of control	1.56%	2.46%
Lack of effective teaching evaluation system	1.56%	1.23%

4. Discussion

4.1 Supports and Barriers for the Improvement of Teaching

4.1.1 *Do We Need Rewards and Endowment for Teaching Quality?*

Research on motivation suggests that extrinsic rewards can be a negative reinforcement for intrinsic motivation (Deci & Moller, 2005; Deci, Koestner, & Ryan, 1999). This has led some researchers to assert that rewards may not be essential to motivate professors to engage in teaching improvement (Berman & Skeff, 1988). However, from an expectancy-value theory of motivation lens, expectancy of success and the subjective task value determine the choice of tasks. Subjective task value includes interest or enjoyment value, attainment value, utility value and cost of performing in a task (Eccles, 2005). The interplay between these four factors determines the overall subjective task value. For instance, in a case where there is no reward for the improvement of teaching or teaching well, leading to the potential perception that teaching is not valued, engagement in improvement activities could be viewed as a distraction from a more important task, for example research (Frost & Teodorescu, 2001; Serow *et al.*, 1999) and will have a cost for the person. Although engaging in teaching development activities can have enjoyment value for some professors, the high cost of engaging in such activities may inhibit them from doing so. A similar notion, articulated as “loss, gain and endowment” is proposed by Tagg (2012). When faculty members who spend time on teaching and improvement gain little and observe that their research-oriented colleagues receive more rewards such as early tenure, promotion and remuneration, they may assign higher priority to research. Many faculty members see tenure, promotion and merit awards linked to research productivity (Tagg, 2012). Indeed, teaching seldom ranks as the most important factor for tenure and is not sufficiently rewarded and recognized in comparison to research (Brownell & Tanner, 2012; Chalmers, 2011; Hardre & Cox, 2009). In some cases, decisions for tenure, merit award and promotion do not even take teaching excellence into account (Frost & Teodorescu, 2001). To offset this mindset, there should be policies that clearly value teaching quality and take it into account for

promotion, tenure and merit awards. Further, that rewards and incentives need to be earmarked for teaching improvement. Tagg (2012) has proposed that universities should restructure their reward and endowment systems and value outstanding teaching. Universities should stop creating any incentives or rewards that link hiring and promotion to research and undervalue teaching (Tagg, 2012) if they expect to see change in the quality of teaching. Similarly, Olmesdahl (1997) acknowledges the importance of equitable system of rewards for excellence and effectiveness in teaching. Other studies have revealed a positive impact and the significance of teaching awards on enhancing the quality of teaching and recognition of teaching in higher education institutions (Brawer *et al.*, 2006; Sorcinelli & Davis, 1996). However, measuring teaching excellence still remains a debateable issue (Magin, 1998; McLean, 2001). The comments of participants in this study correspond with the message conveyed in the existing literature (Tagg, 2012; Frost & Teodorescu, 2001).

4.1.2 *Supportive Teaching Culture*

Participants in the present study acknowledged that lack of recognition and support from departments or administration could be a barrier for the improvement of teaching. Furthermore, they claimed that greater recognition and support would motivate them to pay greater attention to teaching. This view is consistent with previous findings in the literature (Feldman & Paulsen, 1999; Frost & Teodorescu, 2001; Tagg, 2012). Elsewhere, it has also been asserted that effective change will not take place unless universities recognize, value, and support professors' effort toward teaching excellence (Sunal *et al.*, 2001). Supportive teaching culture and departmental culture are important in the improvement of teaching in higher education institutions (Feldman & Paulsen, 1999; Knight & Trowler, 2000). Supportive department chairs, faculty development programs on campus, and the recognition of teaching for tenure and promotion decisions are among the characteristics of such a culture. If there is no explicit recognition of teaching at the departmental level, the potential gains of teaching improvement may be invisible and professors will consider it a waste of time and energy to put any effort on the improvement of teaching (Tagg, 2012). Clearly stated policies that underscore the importance of teaching and highlight it as a priority (Frost & Teodorescu, 2001) and incentives earmarked to recognize efforts put toward teaching excellence are ways that universities and departments can foster teaching improvement. Others have written about balancing teaching and research demands as a way to create a more conducive environment and if an institution wants to engage faculty members in quality teaching (Knight & Trowler, 2000).

4.1.3 *Time and Workload*

Time constraint and workload have been reported to be one of the main barriers to engage in teaching development activities in the literature (Brownell & Tanner, 2012; Lind, 2007; Sunal *et al.*, 2001). Research, teaching and service occupy the time of professors (Fink, 2003). The combined volume of work in these areas reduces the chance of engaging in extra activities to improve teaching. Frost and Teodorescu (2001) conducted a study on professors' recommendations for instructional reform. They found that professors expect universities to protect their time; by either decreasing teaching load or by increasing the number of teaching faculty. If this is done, professors should be able to use the time release for the improvement of teaching. These results are consistent with findings of the current study about time release and course reduction.

Furthermore, professors reported the high load of administration and service obligations as a barrier and the reduction in service obligation as a potential incentive for engaging in teaching improvement activities. In this study, the data pertaining to the importance of teaching improvement and the time being spent on relevant activities support the perception. Although teaching improvement is perceived to be significantly more important than service, it appears that the time spent on teaching improvement is significantly lower than the time being spent on service.

4.1.4 *Teaching Improvement Activities*

Collaborating with colleagues and experts in the context of teaching improvement activities was viewed as an incentive. Since professors typically do not receive any pedagogical training prior to taking on teaching responsibilities, collaboration and consultation about teaching in authentic settings could potentially be a positive experience and could improve their instructional skills. Colleagues are potentially a good resource that can help their peers improve their teaching. Cognitive apprenticeship, mentoring and collaboration and consultation with experts can improve and develop teaching (Collins, 2006; Frost & Teodorescu, 2001; Sunal *et al.*, 2001) and our participants viewed this as an incentive. For instance, professors can consult with experts in planning one or two authentic teaching sessions and designing corresponding learning activities. They can also receive feedback from experts who observe their teaching sessions. This element can be incorporated into teaching improvement activities that are offered in the university.

One of the concerns about teaching improvement activities pertained to the content of these activities. Offering activities that are tailored to specific disciplines was considered an incentive, probably because participants in the present study believed that instructional methods and design vary by discipline. While there is a place for general pedagogies, the differences between disciplines also merit recognition and integration (Becher, 1994; Biglan, 1973), particularly and if this conveys the impression that the intervention is more relevant and appropriate.

One of the interesting findings of this study was that almost half of the respondents did not attend any formal teaching improvement activities including workshops and conferences during the last academic year. However, a high percentage of professors reported that they had read articles (75.2%) and had talked to their colleague about teaching improvement (92%). This points to a great opportunity for teaching development units to connect with faculty. For instance, they can provide faculty with independent study packages and learning resources and recommend useful and discipline targeted readings. By doing so, they can convey the relevance and value of learning about teaching. Furthermore, this might help form learning communities and communities of practice in units, departments and the university to enhance teaching. These communities can hold formal and informal events to discuss issues of common interest with the purpose of improving teaching as well as creating social structures within departments to exchange ideas with colleagues. Learning communities and communities of practice have shown to be effective mechanisms for enhancing teaching (Carnell, 2007; Cox, 2006; Eib & Miller, 2006; Jones 2010; Smith *et al.*, 2008). An emerging recommendation for teaching development units is to localize the teaching improvement activities in departments and to attract more professors by holding regular events to discuss teaching issues contextualized within the disciplines.

4.1.5 *Teaching Evaluation*

Participants in the current study considered teaching evaluation as an incentive for the improvement of teaching. In contrast, the lack of effective methods of teaching evaluations beyond student course ratings was viewed as a barrier for the improvement of teaching. Berman and Skeff (1988) have suggested that faculty members may not be aware of the strengths and weaknesses of current teaching evaluation schemes but an efficient system could inform them about possible deficiencies. Sunal *et al.* (2001) also argue that creating cognitive conflicts are essential for the success of professional development activities because change cannot take place when professors do not experience dissatisfaction over their practice. In this regard, Centra (1993) has suggested that the presence of four conditions in the evaluation can lead to improvement in teaching. First, the evaluation must inform professors about their weaknesses as their perceptions about their own teaching can be far different from what their colleagues and students perceive (Blackburn & Clark, 1975). Thus, an effective teaching evaluation should reduce the gap between what professors perceive and what they deliver to students in classrooms. Furthermore, the focus of evaluations

must shift from judging performance to guiding improvement (Frost & Teodorescu, 2001). Second, professors must value the evaluation and find it credible. Third, they must know or be advised how to use the information to improve their practice. This emphasizes the necessity of the existence of resources or services that offer support on campus for the improvement of teaching, in case professors need these. The final condition recommended by Centra (1993) pertains to the importance of professors' motivation to use the evaluation information for improvement. Not all professors will be intrinsically motivated to use this information; therefore, extrinsic motivators are also needed. Valuing good teaching for promotion, tenure and remuneration can be examples of extrinsic incentives. One suggestion is to use more than one mechanism to evaluate teaching to increase the validity of the results (Frost & Teodorescu, 2001). As mentioned above, teaching evaluations must inform professors about possible deficiencies in their teaching; otherwise this source may not be effective. Once areas of improvement have been identified, the institution ought to have available resources and provide expertise to help professors address the identified areas.

4.1.6 *TA Support*

A suggested incentive arising from the present study was to allocate funding for teaching assistants to help professors in developing new courses. This, however, may also have an inadvertent negative impact as there is research evidence about ineffective instruction by teaching assistants at the undergraduate level (Serow *et al.*, 2002; Serow *et al.*, 1999). Given these findings, it might be more beneficial if teaching assistants were to help professors broaden their teaching and learning knowledge rather than by taking over the instruction.

4.2 Difference between Non-Tenured and Tenured Professors

Non-tenured professors expressed that they experience pressure in demonstrating excellence in research performance. Their perception was that the University de-emphasizes teaching and they have to follow this policy in order to ascertain their success and, therefore, cannot take time from research or service to engage in the improvement of teaching. A possible interpretation of this difference between non-tenured and tenured faculty members could be that tenured professors benefit from a more secure job position so that they feel more autonomous to spend time on activities that interest them. The University culture consequently can have less impact on their choice of activities. Whether this is just a perception or a reality, it seems to be having an impact on non-tenured faculty and needs to be further explored.

5. Conclusion

This study shed light on perceived barriers and supports to engage in the improvement of teaching. Addressing these barriers and reinforcing the supports can lead to further engagement in teaching improvement activities. One of the primary steps toward quality teaching is to enhance professors' pedagogical skills. Building communities of learning and practice in departments is a potential solution to the abovementioned problem and can lead to greater engagement of professors and possibly draw in those who are not frequent users of teaching development units. This is proposed by participants in the present study as well as suggested in previous studies.

Professors' perceptions of barriers and supports suggest that the University, if it indeed values teaching, should either change its policies about teaching or make existing favourable policies more explicit to correct erroneous perceptions. Non-tenured professors are mostly concerned that the University culture is not conducive to teaching and considered this as a barrier. Elsewhere, it has been argued that lasting change requires that universities transform their culture into a supportive teaching culture (Feldman & Paulsen, 1999; Frost & Teodorescu, 2001). While this kind of change is important, it is equally important that the perceptions of the academic community concerning the

importance and meaning of teaching also be shifted. Expecting professors to value teaching while the university or departmental culture value research or devalue teaching are not reasonable. Clarifying teaching goals and professors' commitment for teaching by universities can be helpful in informing professors about the meaning of teaching and their expected roles in their institutions (Frost & Teodorescu, 2001).

Change can be initiated by making teaching a priority. Universities should encourage faculty members to enhance the scholarship of teaching and learning by valuing research on pedagogy and teaching excellence in different disciplines. Projects can be defined in institutions to engage professors from different disciplines and with different ranks to develop a plan for change. Brownell and Tanner (2012) assert that academics have made the current policies and regulations about teaching and research and their impact on professional advancement; they need to take steps again and make policies that transform university cultures into a culture that values teaching excellence.

6. Limitation

Since this study employed a survey design and the data were primarily self-reports, the general limitations that are associated with survey design are applicable to this study. Although data produced from a self-report questionnaire are valid, one limitation is that the questionnaire may draw a picture that is different from what is practiced in reality. This study did not have the potential to triangulate the results by analysing different sources of data.

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