

**IMPLEMENTING COLLABORATIVE LEARNING AT THE UNIVERSITY OF
GUELPH: FACULTY PERCEPTIONS OF ISSUES AND CHALLENGES**

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ABSTRACT

IMPLEMENTING COLLABORATIVE LEARNING AT THE UNIVERSITY OF GUELPH: FACULTY PERCEPTIONS OF ISSUES AND CHALLENGES

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The goal of this study focussed on identifying issues and challenges experienced by University of Guelph faculty when implementing collaborative learning in undergraduate classrooms. Those challenges were categorized under one of five headings: faculty concerns, student issues, operational challenges, the physical environment, and institutional/cultural factors. To achieve this goal, a qualitative study using semi-structured interviews with seven University of Guelph faculty was undertaken. Using both deductive and inductive methods of analysis several issues were identified within each category, and the importance of journey and reflection as faculty develop as teachers and move toward collaborative learning, was unveiled. While the challenges experienced by University of Guelph faculty are extensively supported by the literature, reference to the latter finding in higher education is less well documented.

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CHAPTER 1 - Introduction to the Study

Introduction

Among the calls for reform in higher education is the replacement of traditional approaches to teaching where knowledge is transmitted, to new concepts such as constructivism where the emphasis is on learning and knowledge development. Barr and Tagg (1995) refer to this development as a paradigm shift from teaching to learning. This shift symbolizes a twenty-five-year period of “dramatic transformation” or “cognitive revolution” in the field of learning (King, 1996). Coupled with reports suggesting problems with undergraduate education (Smith & MacGregor, 1992) and research indicating improved student learning through active, experiential settings (Bonwell & Eison, 1991; Meyers & Jones, 1993) educators, now more than ever, are increasingly challenged to provide interactive learning environments that accommodate different learning styles (Komives & Woodard, 1996), increase student responsibility, and produce positive learning outcomes (Boggs, 1999).

This “revolution” is reflected in the educational development literature. Barr and Tagg (1995), for example, describe the change in higher education as a paradigm shift from teaching to learning. Meanwhile, Richard Tiberius (1986) uses metaphor to describe undergraduate teaching as either “transmission” or “dialogue.” The former is marked by distance, authority, and formalism where knowledge is compartmentalized, delivered, and received (Tiberius, 1986). The latter “emphasizes interactive, cooperative, and relational aspects of teaching and learning” (Tiberius, 1986: 148). Both produce an assortment of

pedagogical practices that emerge from student-faculty interactions, the influence of institutional settings, and the larger social context (Tiberius & Billson, 1991; Matthews, 1996); however, the traditions from which each one develops and the goals they espouse, vary considerably.

The catalyst fuelling this change stems in part from the transition of an industrial to an information-based economy (Naisbitt, 1982; United Way of America, 1989 as cited in Komives & Woodard, 1996). Coupled with other developments such as the growth in sophisticated communication technology - networks and decentralization have grown (Naisbitt, 1982; Naisbitt & Aburdene, 1990), the movement toward globalization has evolved (United Way of America, 1989 as cited in Komives & Woodard, 1996), and the “. . . plunge into [an] information society” (Naisbitt, 1982: 13) has begun.

Since then, “the ethic of participation [has spread] bottom up . . . radically altering the way we think people in institutions should be governed” (Naisbitt, 1982: 159). Indeed, “the failure of hierarchies to solve society’s problems [has] forced people to talk to one another . . . ” (Naisbitt, 1982: 191) and has contributed to the growth of the networking concept across society. No where is this more apparent than in the business world. As industry and finance become “. . . more complex, the ability of any one person to cope with it satisfactorily has been greatly reduced” (Fiechtner & Davis, 1984-85: 58). In response, professional management teams and participative management styles have grown (Smith & MacGregor, 1992) and “the manager as order giver [has given way to] the manager as teacher, facilitator, and coach” (Naisbitt & Aburdene, 1990: 221).

Education likewise is responding to the call for networking, moving toward the metaphor of dialogue (associated with community-oriented processes and outcomes) and away from the metaphor of transmission (traditionally associated with individualistic approaches). As a result, innovative teaching approaches such as collaborative learning have emerged, which like networks “. . . share ideas, information, and resources; ...create and exchange . . . knowledge” (Naisbitt, 1982: 191-192); and “. . . provide a particular kind of social context for conversation . . .” (Bruffee, 1984: 27). “Just as the rest of the world now works collaboratively as a universal principle” (Bruffee, 1987: 42), so too should education take place in collaborative settings (Sheridan, 1989).

Historical Background of Collaborative Learning

Collaborative learning has become a “catch phrase” of the 1980s and 1990s, increasingly used in higher education as an innovative alternative to didactic instruction like the more dominant lecture (Bruffee, 1984; Smith & MacGregor, 1992). Researched and implemented more widely in the past from K to 12 (Cooper & Mueck, 1990; Johnson, Johnson & Smith, 1991; MacGregor, 1990), today, collaborative learning is routinely studied and discussed in the arena of higher education. This is evidenced by the growing number of conferences (i.e. STLHE¹), articles in scholarly journals, professional associations, and resource materials focussing on this topic (Smith and MacGregor, 1992).

Collaboration, however, is not new to education. Historically, collaborative learning has roots in a number of learning approaches - cooperative learning, problem-centred

¹STLHE = Society for Teaching and Learning in Higher Education

instruction, writing groups, and peer teaching (Smith & MacGregor, 1992; Bruffee, 1993). John Dewey was an early influence in its development with his emphasis on discussion methods, direct experience with “real world” problems (Smith & MacGregor, 1992), and greater self-control as students “ . . . develop the ability and confidence to exercise the craft of interdependence” (Bruffee, 1993: 4). More recently, theoreticians and practitioners from the humanities and the social sciences have explored “ . . . theoretical, political, and philosophical issues such as the nature of knowledge as a social construction and the role of authority in the classroom” (Matthews et al., 1995: 40). Research in the field of learning has furthered the collaborative cause as well, with studies painting learners as active constructors rather than passive recipients of knowledge (King, 1996). “It is now widely accepted that learning involves metacognitive functions and the construction of knowledge by the learner” (King, 1996: 219), and that these goals are best achieved through interdependent social contexts which help students navigate their way between knowledge communities (Bruffee, 1993).

Problem

As education responds to societal challenge and change, "colleges and universities are under increasing pressure to enhance their learning environments . . ." (Komives & Woodard, 1996: 548; Bonwell & Eison, 1991; Smith & MacGregor, 1992). Faculty in particular are being held accountable for their teaching effectiveness (Bonwell & Eison, 1991), as growing evidence suggests that the dominant method of teaching - the lecture - fails to maximize student learning (Palmer, 1990; Bruffee, 1993; Meyers & Jones, 1993; Barr & Tagg, 1995). This is further compounded by reports which continue to emphasize

" . . . distance between faculty and students, . . . an educational culture that reinforces student passivity, . . . and a reward system that gives low priority to teaching" (Smith & MacGregor, 1992: 9). As such, educators need to be "reaccultured" by undergoing a cultural change (Bruffee, 1993) or as Barr and Tagg (1995) suggest - a paradigm shift.

Collaborative learning, as one of many innovative pedagogies, holds promise for bridging this gap, while improving student learning and revitalizing teaching in undergraduate education (Smith & MacGregor, 1992). Indeed, collaborative learning supports many of the *Seven Principles for Good Practice in Higher Education* outlined by Chickering and Gamson (1987), such as encouraging student-faculty interactions; promoting cooperation among students; embracing active learning; and respecting diverse individuals, talents, and ways of knowing. Likewise, its flexibility and adaptability to a range of disciplines make it a viable educational option. Finally, research continues to support the fact that students learn better in collaborative settings especially when experience, learning, and understanding are shared, and meaning created (Bruffee, 1984; Gamson, 1994; Gibbs, 1995; Sheridan, 1989; Whipple, 1987).

At the University of Guelph, the language used by administrators suggests a growing emphasis on innovative teaching and learning. Its espoused importance is supported by the University's Strategic Planning Document (1995) which emphasizes learner-centredness, collaboration, interdisciplinary/interdepartmental initiatives, and curricula reform. Whether initiatives are underway to achieve these goals, however, is another story. With limited resources and a system emphasizing teaching over learning, and

research above everything else, faculty and administrators need to be creative to effect graduated and positive change in undergraduate education. In this, the potential for collaborative learning and other innovative approaches is great. Though collaborative methods may initially prove challenging (Felder, 1995; Felder & Brent, 1996; Johnson, Johnson & Smith, 1998) and risky to faculty (Bonwell & Eison, 1991; Felder, 1996; Burge, 1993; Boggs, 1999), "collaborative learning, with its emphasis on social and intellectual engagement, and mutual responsibility, aims to counteract many . . . educational and societal trends" (Smith & MacGregor, 1992: 9).

Purpose

The goal of this study was to determine faculty perceptions of issues and challenges associated with the implementation of collaborative learning in undergraduate classrooms at the University of Guelph.

Objectives

The objectives of this study were to:

- identify institutional issues and concerns perceived by faculty which challenge successful implementation of collaborative learning;
- identify student issues and concerns perceived by faculty which challenge the successful implementation of collaborative learning;
- identify environmental (physical) issues or concerns perceived by faculty which challenge successful implementation of collaborative learning;
- identify cultural issues and concerns perceived by faculty which challenge the

successful implementation of collaborative learning; and

- identify issues or concerns of faculty as they relate to their teaching practice and professional development.

Significance

By identifying faculty perceptions of issues and challenges associated with the implementation of collaborative learning, a number of aims were met. First, recommendations to support the implementation of collaborative learning in undergraduate settings at the University of Guelph were identified. Second, suggestions for policy development were put forth. Third, a means to inform other universities of the challenges linked with implementing collaborative learning were achieved. Finally, areas for future study were identified.

Methodology

As the goals of this study necessitated a group of faculty who were familiar with collaborative learning and who practised its use within their classrooms, a purposeful sample was chosen. Drawing upon the expertise of Professor Ron Stoltz, Director of Teaching Support Services, nine University of Guelph faculty were identified for this purpose. Each professor was chosen on the basis of Ron's familiarity with their teaching practice and his understanding of both my conception of collaborative learning and my overall research objectives. From this list of nine professors, the top seven were selected. These candidates were contacted by a formal letter, with interview details addressed by telephone or e-mail, once their participation was confirmed.

To achieve my research objectives, a qualitative study using semi-structured interviews was conducted. This approach was chosen for the flexibility it offered in probing for depth, asking additional questions, clarifying faculty responses, and sequencing my inquiries appropriately. During the interviews, an interview guide was followed in which introductions were made, an explanation of my research shared, the approval for audio taping the session confirmed, and the signing of consent letters completed. Following these formalities, a total of sixteen questions were posed. These questions and their individual probes were developed from my survey of the literature and my own experience. The first three set the context of the interview, the next ten addressed key issues of the study, and the last three concerned follow-up issues and demographic inquiries. Together they provided a wealth of data to perform analysis and determine my researching findings.

As the categories of the various issues and challenges associated with implementing collaborative learning were already identified by my research objectives or revealed during the interview process, a deductive approach to analysis was undertaken. Following the transcription of each interview and a period of familiarization with the transcripts, data were clustered into categories. In the process of managing the data however, stories emerged for each faculty member providing a context to understand their identified issues and challenges, and a means to illuminate the data further. With the progression of each story then, an inductive approach was introduced and a process of cross-case analysis was conducted.

Limitations

- This study used a purposeful sample and is contextually bound to the University of Guelph. Generalizations to other higher education institutions, even other faculty at Guelph, should be cautioned.

Definitions

1. *Collaborative learning* requires higher order cognitive skills and embraces a range of active learning approaches that involve students and faculty in a social process of meaning making and knowledge construction.
2. *Cooperative learning* is a systematic approach to team learning, which structures defined tasks or problems around group work, and has academic and social outcomes as its desired goals.
3. *Active learning* directly involves students in a variety of learning processes, including: listening, reading, writing, discussion, problem solving, and higher order thinking. Students not only do, but they think about *what* they are doing.
4. *Constructivism* is an epistemology which recasts knowledge as something which is constructed through dialogue within a community of learners, not transmitted from teacher to student.

CHAPTER 2 - Literature Review

Origins of Collaborative Learning

Development

Collaborative learning is a relatively recent phenomenon to post-secondary education. Unlike cooperative learning which has a rich history and has been studied extensively from K-12 (Johnson, Johnson & Smith, 1991; 1998), collaborative learning is more recently coined (Bruffee, 1984), indigenous to higher education of the 1980s and 1990s (Romer, 1985; MacGregor, 1990; Smith & MacGregor, 1992; Lee, 1994). Indeed, Gamson (1994) points to social movement studies which suggest the first step to receiving recognition is having a name. The term and basic ideas for collaborative learning were developed in the 1950s and 1960s. Bruffee (1984; 1993) credits Edwin Mason, a British educator of the late 1960's, to initiating much discussion about collaborative learning in light of work by both John Dewey and Paulo Freire. Prior to Mason however, Bruffee (1984) as well as Smith and MacGregor (1992) highlight the work of M.L.J. Abercrombie. This researcher, for example, studied the training of medical students and discovered they learned better in small group settings, when diagnosing collaboratively. Now of course, collaboration and problem-based learning are major components of the medical program at McMaster University and other such institutions.

In North America, “the work on collaboration in education is more like an arbor of vines growing in parallel, crossing and intertwining” (MacGregor, 1990: 21). Many of these vines are rooted in a variety of learning approaches, mainly: cooperative learning,

problem-centred instruction, writing groups, and peer teaching (Smith & MacGregor, 1992). Cooperative learning, for example, has one of the richest histories recorded and is most developed (Johnson, Johnson & Smith, 1998). It comprises five basic elements central to its use, which collaborative learning likewise encompasses. Those elements include: positive interdependence, face-to-face interaction, individual accountability, social skills, and group process (Johnson, Johnson & Smith, 1991). Ventimiglia (1994) and Whipple (as cited in Gamson, 1994) suggest that collaborative learning, in essence, is cooperative, but takes student learning one step further to confront issues of authority and power as faculty and students actively construct knowledge. Indeed, cooperative learning is focussed at K-12 and has roots in social psychology. In contrast, collaborative learning hails from social constructivism (The Teaching Professor, 1995) and is intended for use with a different audience (Bruffee, 1995).

Problem-centred instruction incorporates many aspects of collaborative learning and is widely used in professional settings such as business and medicine. More recently, its use has grown in other areas, such as the liberal arts (Smith & MacGregor, 1992). The “roots” of this collaborative approach draw from the work of John Dewey, a theorist who “endorsed discussion-based teaching and believed strongly in the importance of giving students direct experiential encounters with real-world problems” (Smith & MacGregor, 1992: 13). Abercrombie, as mentioned earlier, likewise did much to impact collaborative learning in the medical field and in higher education overall.

Writing groups continue to be popular in undergraduate collaborative learning settings,

with the teaching of writing (Smith & MacGregor, 1992). While formally they have been practised since the 1960s, they have a rich history in literary societies and in writing clubs of American universities during the late 18th and early 19th centuries. As Smith and MacGregor (1992: 16) share, “writing at both the secondary and undergraduate level have embraced peer writing because it helps students see writing as an emergent and social process.” The latter holds significance for collaborative learning, as the social context provides a basis to promote conversation and community - the building blocks of knowledge construction and meaning making.

Peer teaching dates to one-room schoolhouses of early North American education. Within the last few decades however, it has received marked attention in post-secondary settings. The work of Goldschmids, for example, at McGill University has furthered the use of peer support, demonstrating through research, that students paired together in “learning cells” outperform students learning through other approaches such as discussion methods and independent study. Chickering and Reisser (1993) similarly support peer teaching, as students often learn more from one other, than from professors alone. Bruffee (1984) attributes the growing use of peer teaching, as a response by institutions, to help entering year students adjust to higher learning and reduce attrition rates. He further attributes the element of a social context and the “educative force” of peer influence, to its growing success. Indeed, “social interactions are fundamental to negotiating meaning and building a personal rendition of knowledge” (Adams & Hamm, 1996: 7).

At the University of Guelph, for example, there is a strong tradition of students helping

students through their Peer Helper Program². This is particularly evident in two areas: Learning and Writing Services and University College Connection. In the former, student peers offer programming and consultations to other students. In the latter, first year students are clustered into learning communities³, where a senior Peer Helper supports their transition to academia. Both capitalize on peer teaching and the benefits associated with its use.

Terminology and Definition

With so many approaches influencing the development of collaborative learning, educators and researchers find it difficult to articulate what it is and describe what it looks like. Tebo-Messina (1993: 63) expressed this very sentiment, suggesting “. . . collaborative learning is as complex a goal to achieve as it is to classify.” Smith and MacGregor (1992: 10), for example, describe collaborative learning as “. . . an umbrella term for a wide variety of educational approaches involving joint intellectual effort by students or students and teachers together.” Matthews (1996: 101) suggests “a class engaged in collaborative learning looks and feels different from a traditional classroom [setting and describes it as] more student-centred, active, and task oriented . . .” Lee (1994) uses collaboration to describe a range of relationships on a continuum. While each description of collaborative

2

The Peer Helper Program provides students with opportunities to help their peers and develop transferable skills and competencies, while working as paraprofessionals in a variety of support roles such health education, learning and writing, career counselling, and many more.

3

Learning communities have also been in practice for approximately 60 years, with growing use in a variety of forms in many institutions (Smith & MacGregor, 1992).

learning offers insight and adds to the literature, clarity of its definition is still limited.

In response, the American Association of Higher Education organized a steering committee on collaborative learning, bringing together eight veteran collaborators to clarify the debate (Whipple, 1987). They met with limited success, arriving instead, at four key dimensions to characterize the collaborative concept. They include: a distinct pedagogical style; a distinct epistemology; a distinct set of effects upon participants; and a distinct culture. Again, while illuminating, we remain uncertain as to what collaborative learning looks like. Perhaps educators are best served by drawing from their own experiences and noting the characteristics which researchers most often associate with the practice of collaborative learning, namely: active learning, meaning making, joint intellectual effort, knowledge construction, a social context, and a sense of community as teachers and students work together (Whipple, 1987; MacGregor, 1990; Smith & MacGregor, 1992; Bruffee, 1993; Meyers & Jones, 1993; Matthews, 1996).

Collaborative vs Cooperative Learning

While “collaborative learning” was coined in the middle of this century, practitioners and the literature often use the terms of cooperative and collaborative learning interchangeably (The Teaching Professor, 1995). Many educators, for example, often wonder if collaborative and cooperative learning are two versions of the same thing or if they are unique pedagogical practices that have developed in their own right? On the surface they may appear relatively the same. An in-depth analysis however, will reveal differences between the two. Though each approach shares similar goals, techniques and

characteristics they originate from different philosophical and epistemological roots.

To clarify, it may prove helpful to identify similarities between collaborative and cooperative learning. Both approaches, for example, incorporate active learning (Whipple, 1987; Cooper, 1990; Johnson, Johnson & Smith, 1991; Matthews, Cooper, Davidson & Hawkes, 1995; Matthews, 1996); define learning through joint intellectual development (Smith & MacGregor, 1992; The Teaching Professor, 1995); resonate with the idea of community (Whipple, 1987; The Teaching Professor, 1995; Millis, 1995; Matthews, 1996); rely on a variety of small group structures (Millis, 1995; The Teaching Professor, 1995); develop social and team skills (Fennell, no date; Cooper, 1990; Johnson et al., 1991; Matthews et al., 1995); further the appreciation or acknowledgement of diversity (Smith & MacGregor, 1992; Matthews et al., 1995); promote positive student relations (Cooper, 1990; Millis, 1995); foster face-to-face student interactions (Johnson et al., 1991; 1998); and promote higher-order thinking skills (Matthews et al., 1995; Johnson et al., 1991). This list is by no means exhaustive, but highlights the overlap that exists between the two approaches.

Collaborative and cooperative learning, however, are distinct methods developed for distinct settings. As Bruffee (1995: 12) contends, each was “. . . developed originally for educating people of different ages, experience, and levels of mastery of the craft of interdependence.” Where then do they differ? Researchers note a number of dissimilarities, in terms of the relationship of power and authority between teacher and student (Matthews et al., 1995; Bruffee, 1995). They similarly note differences in the

extent to which students should receive group training (The Teaching Professor, 1995); the desired outcomes each method maintains (Wren & Harris-Schmidt, 1991); the handling of issues such as assessment and accountability (Bruffee, 1995); and the nature of the teacher's role and level of involvement in the classroom (Smith & MacGregor, 1992; Adams & Hamm, 1996). Bruffee (1995) additionally highlights a more subtle difference which he believes colleges, university teachers, and administrators alike should be aware of, mainly: the use of one method over another incorporates different assumptions about the nature and authority of knowledge.

Perhaps clarity can be provided by looking at the philosophical and epistemological origins of each approach. As Matthews and his associates (1995) found, each method developed separately from different paths. Cooperative learning, for instance, owes its origins to basic education (The Teaching Professor, 1995), where researchers and theoreticians from education, social psychology, and sociology have studied cooperative learning extensively in its application from K-12 (Matthews et al., 1995). As one researcher defines it, "cooperative learning is a system of team learning that structures group work in such a way that it promotes both social and academic goals of group activities" (The Teaching Professor, 1995: 3). In contrast, collaborative learning evolved from social constructivism (Bruffee, 1984; The Teaching Professor, 1995; Matthews, 1996) and is studied by theoreticians and practitioners from the humanities and the social sciences, who often ". . . explore theoretical, political and philosophical issues such as the nature of knowledge as a social construction and the role of authority in the classroom" (Matthews et al., 1995: 40).

In practice, “cooperative learning tends to be more structured in its approach to small group instruction, to be more detailed in advice to practitioners, and to advocate more direct training of students to function in groups . . . ” (Matthews et al., 1995: 40). To succeed in cooperative learning, students need to develop interpersonal and group process skills, a willingness to learn, and a sense of individual accountability. Cognitively, they are challenged with using higher-order thinking skills to complete assignments. In terms of attaining knowledge and understanding, it comes with accomplishing a task or an assignment, in a productive environment supportive of positive interdependence and joint intellectual effort (The Teaching Professor, 1995).

By contrast, “collaborative learning practitioners . . . assume students are responsible participants who already use social skills in undertaking and completing tasks” (Matthews et al., 1995: 40). Students, therefore, are said to be less in need of group skills instruction or a high degree of structure (Matthews et al., 1995). Cognitively, the demands are also higher, as the goal of collaborative learning is the creation of knowledge in a shared inquiry process (Bruffee, 1984; Bruffee, 1995; Matthews, 1996). As such, the requirements of students under this approach, involve an openness to sharing diverse ideas and experiences, to enhance the learning of both themselves and their peers. Indeed, with the social context collaborative learning provides, “. . . students can experience and practice the kinds of conversation valued by college teachers” (Bruffee, 1984: 642).

Perhaps collaborative learning and cooperative learning can be best viewed as complementary practices. Bruffee’s (1995: 16) suggests “. . . collaborative learning is

designed to pick up where cooperative learning leaves off.” This suggests, as Bruffee (1995: 12) alluded to earlier, that collaborative and cooperative learning have been developed “. . . for educating people of different ages, experience, and levels of mastery of the craft of interdependence.” Taken together though, they offer “a systematic approach to instructional reform that many [today] are . . . seeking in higher education” (The Teaching Professor, 1995: 3).

Collaborative Learning in Higher Education

The call for change

Since the 1980s, higher education in North American has been inundated with reports suggesting problems with undergraduate classrooms (Smith & MacGregor, 1992; Bonwell & Eison, 1991; Meyers & Jones, 1993). Many of these reports stem in part from changes in the larger social context (i.e. business community) and research into student learning.

The latter suggests problems in institutions such as:

...distance between faculty and students, a fragmented curriculum, a lack of student community, a prevailing pedagogy of lecture and routinized tests, an educational culture that reinforces student passivity, high rates of student attrition, and a reward system that gives low priority to teaching (Smith & MacGregor, 1992: 9).

The former sends “. . . repeated messages that collaboration and teamwork are valued activities” (McCabe & Cole, 1995: 3; Smith & MacGregor, 1992; Anderton-Lewis & Pogue, 1996).

Traditionally, university and college teachers thought students learned best through

instructional practices and activities such as lectures, assigned readings, problem sets, laboratory work, and field work (Boggs, 1999). While in many instances this may be true, researchers increasingly attribute better learning outcomes to active learning approaches (Bonwell & Eison, 1991; Meyers & Jones, 1993; Barr & Tagg, 1995). Verily, “the extent to which a faculty member relies on lecture is negatively related to the use of active learning strategies”(Astin, 1993: 39). Fortunately, traditional practices and assumptions about teaching and learning are being challenged by new research in how students learn (Boggs, 1999; AAHE, 1993). Indeed, studies increasingly document student preference for active learning approaches, while research on assessment outcomes suggests active learning is comparable, if not better than lecture, in developing students’ skills in thinking and writing (Bonwell & Eison, 1991; Barr & Tagg, 1995).

In the presence of these institutional challenges and research supporting greater use of active learning strategies, collaborative learning is both welcome and timely.

How collaborative learning responds to and meets the needs of higher education?

At a time when higher education and society beyond are torn by divisiveness, collaborative learning offers a way into community. It [extends] a pedagogy that has at its centre the assumption that people make meaning together and that the [social] process enriches and enlarges them [individually and collectively] (Matthews, 1996: 103).

Collaborative learning additionally offers opportunities to develop: new cognitive skills, the ability to view scholarly activity more broadly, a more democratic mode of thinking, greater tolerance for diversity, and a classroom revitalized both inside and beyond (Sheridan, 1989; Adams & Hamm, 1996). In this, it responds to many of the problems

associated with undergraduate education as identified above.

In the context of society, collaborative learning prepares students for a world of work which increasingly seeks graduates, who are both competent as collaborators and skilled in the art of group work (McCabe & Cole, 1995; MacGregor, 1990). In terms of the classroom, collaborative learning offers both flexibility and adaptability to a range of disciplines (Smith & MacGregor, 1992). It further transforms students from passive recipients of knowledge to active, constructive learners. At the same time, it diminishes space between learner and instructor, enabling students to make friends more easily among their classmates and feel better about their work (Sheridan, 1989).

Given the benefits of collaborative learning, why then hasn't it come to the forefront of educational practice sooner? MacGregor (1990: 20) offers the following explanation.

[While] there have always been social dimensions to the learning process, . . . only in recent decades have specially designed collaborative learning experiences been regarded as an innovative alternative to the lecture-centred and teacher-as-single authority approaches typical of most college classrooms.

Perhaps this most strongly speaks to the paradigm shift detailed by Barr and Tagg (1995).

Implementing collaborative learning in higher education

While collaborative learning offers many benefits and positively contributes to both educational reform (Wren & Harris-Schmidt, 1991) and the learning paradigm (Barr & Tagg, 1995), its implementation is not without risk (Bonwell & Eison, 1991; Felder & Brent, 1996). Instructors often express lack of skill having been trained during their

graduate programs as researchers and having started their careers with little if any background in education or pedagogy (Knapper, 1995). For them, leaving the safe haven of traditional teaching practice and attempting to try something new, requires determination and support as they navigate what Richard Felder's and Rebecca Brent's (1996) titled article suggests - the bumpy road to student-centred instruction.

Two of the most common concerns expressed by faculty address issues of authority and teacher control. Because collaboration places students at the centre of learning and in equitable relationships with faculty in terms of knowledge construction, many professors experience a loss of teacher control (Boggs, 1999; Felder & Brent, 1996). MacGregor (1990) suggests faculty need to reframe their instructional role to accommodate a broader definition of teaching. This by no means lessens their teacher status or professional standing, rather, it "... focuses the resources of the institution on the outcomes of student learning" (Boggs, 1999: 5). In turn, this allows faculty to direct their energies to designing learning environments, assessing student learning, providing student resources, and modifying the classroom climate (Boggs, 1999). At the same time, faculty are freed to model attitudes of inquiry and collaboration, focussing on the process of learning as opposed to identifying correct answers (Adams and Hamm, 1996). In this, professors demonstrate their expertise (Finkel & Monk, 1983).

While faculty have their own challenges to overcome, they may additionally encounter student resistance as learners experience collaborative learning for the first time (MacGregor, 1990). For example, its newness and expectations of greater student

responsibility, differ considerably from the individual and competitive environment they navigated with success during high school. As Lawrence (1997b) suggests, most students are conditioned from prior schooling to the “teach and test mode,” where students view knowledge as something “out there,” and hold instructors responsible for identifying and imparting this information. Forced instead from their passive role associated with traditional classroom learning, students find themselves grappling with new roles and new expectations. From listener, note taker, and observer they move to problem solver, contributor, and discussant (MacGregor, 1990); from low or moderate expectations for classroom preparation they move to greater levels of preparedness (Felder & Brent, 1996; Lawrence, 1997b); from a private presence in the classroom their role becomes more public (MacGregor, 1990); from a competitive model they move to collaboration; from independence their focus changes to interdependence; and finally, from viewing their teacher as sole authority in the classroom they shift focus to recognizing both themselves and their peers as sources of experience and knowledge (MacGregor, 1990; Lawrence, 1996).

While students are expected to embrace these roles, not all do so successfully. Faculty (and students) are left to deal with resulting outcomes, such as social loafers and ill-prepared students (Felder & Brent, 1996; Lawrence, 1997b). In response, Lawrence (1997a) suggests building a safe and comfortable environment that engenders student support and positive interdependence.

In implementing collaborative learning, issues of content coverage and assessment are

additionally challenging as faculty adjust to their decentralized role in the classroom (Sheridan, 1989; MacGregor, 1990; Burge, 1993; Bonwell & Eison, 1991). In this, time becomes an issue, especially with the brevity of classes and the shortness of the semester system (Bruffee, 1993; MacGregor, 1990; Sheridan, 1989). Indeed, for collaborative learning to be successful, teachers “. . . need to provide time for students to grapple with problems, try out strategies, discuss, experiment, explore and evaluate” (Adams & Hamm, 1996: 9). Instructors, therefore, need to “reconcile” their sense of responsibility to covering content, with commitment to enabling students to learn on their own (MacGregor, 1990). At the same time, they need to address assessment issues, including concerns about feedback, accountability, and the authority of professors in the evaluation and grading process. As MacGregor (1990: 28) clearly details,

what remains problematic . . . is that faculty members are still the expert witnesses of student learning, and the holders of power relative to the grading process. And, more than any other factor, instructors’ evaluative processes act to divide students, and to press the classroom atmosphere back into a competitive mode.

In terms of the physical classroom environment, the availability and appropriateness of the educational space, additionally becomes challenging. As Adams and Hamm (1996) discovered, collaborative learning cannot truly take place when students are sitting in rows, facing the teacher. A certain physical arrangement is needed which creates the desired learning climate (Sheridan, 1989). Psychologists theorize, for example, that learning environments have “personalities” which can influence the overall learner setting (Valhala, 1994). As Lawrence (1997a) discovered through her research on learning communities, physical arrangements which group students together contribute to the

development of team cohesiveness and improved student learning.

Institutionally university structures, policies, and practices further impinge upon collaborative learning and the level of risk faculty are willing to assume in embracing something new. Professors, for instance, "...have been trained by example to provide instruction and grade students" (Boggs, 1995: 5), and are evaluated and rewarded, in part, by how well they present material (Barr & Tagg, 1995). Attempting innovation like collaborative learning, which falls under the learning paradigm and emphasizes student learning over teaching, may be construed as risky (Felder, 1996; Bonwell & Eison, 1991). Compounded by institutional practice which tends to hire faculty for their research ability and expertise, a pattern is set which combined with other university policy (i.e. recognition and reward structures), predominantly supports didactic forms of teaching and promotes competition and isolation (Barr & Tagg, 1995). Given these circumstances, it's of little wonder that incentive to change is minimal (Bonwell & Eison, 1991).

Indeed, "the gap between what we say we want of higher education and what its structures provide has never been wider" (Barr & Tagg, 1995: 14). The institution,

with its 50 minute lecture as the one-teacher, one-classroom, three-credit-hour course [forms the basis from which] the physical architecture, the administrative structure, and the daily schedules of faculty and students are built. Faculty have so internalized that constraint that they are long past noticing that it is a constraint, thinking it part of the natural order of things (Barr & Tagg, 1995: 19).

This may have worked well under the instructional paradigm, however, collaborative learning requires supporting institutional structures and it therefore at a disadvantage.

Indeed, “the learning paradigm requires a constant search for new structures and methods that work better for student learning and success, and expects even these to be redesigned continually and to evolve over time (Bar & Tagg, 1995:20).

Summary

While collaborative learning is not without risk, it offers many benefits in support of educational reform and student learning. Part of its success, however, lies in identifying the issues and challenges faculty commonly encounter and in determining ways to address them in a strategic manner. Chapter three outlines the process I followed to determine these factors with faculty from the University of Guelph.

CHAPTER 3 - Methodology

Introduction

This chapter provides documentation of my research from the selection of my sample through to the analysis of my findings. As identified in chapter one, I performed a qualitative study using semi-structured interviews with seven University of Guelph faculty. Directed by this process, I focussed on the challenges each professor encountered as they implemented collaborative learning with their undergraduate students. Through deductive analysis, issues and challenges were identified and categorized according to my research objectives or as they originated from the interview process. Using an inductive approach, a step which became necessary as stories emerged from the data, a case study (story) was written for each professor and a table identifying the significance of their journey's events was prepared. Together, these documents formed the basis to perform cross-case analysis and to observe themes and patterns emerge from the data.

Sample Selection

A purposeful sample was identified for this project with the aid of Professor Ron Stoltz, Director of Teaching Support Services (TSS). As Director of TSS, Ron was well qualified to identify innovative faculty who employed collaborative learning in their undergraduate classrooms. Before proceeding with the identification process, Ron consulted with me about my research objectives and discussed with me my understanding of collaborative learning. Using this as a context, Ron compiled a list of potential faculty members. A total of nine University of Guelph professors, who met my criteria, were

identified. The top seven were earmarked for contact, leaving two alternates in case the appointed candidates were unavailable or choose not to be involved. The seven individuals chosen for study were selected on the basis of their varied teaching experience⁴ and a desire to achieve a balance both in gender [female (3)] and teaching discipline⁵.

Each candidate was initially approached through a contact letter (see Appendix A). In this letter, I formally introduced myself, explained my research interests, and extended an invitation, to share with me, their individual teaching experiences. Faculty were invited to contact me either by telephone or e-mail correspondence. Candidates who did not contact me within a two-week period were sent a follow-up e-mail (see Appendix B). Through this process all seven faculty agreed to participate. Prior to the interview, each participant received an e-mail communication confirming the particulars of their interview, along with a list of interview questions. Questions were shared ahead of time, recognizing many inquiries required forethought, if faculty were to fully articulate the richness of their experience. It also proved an efficient use of interview time.

Interview Design

To achieve my research objectives, a qualitative study using semi-structured interviews was undertaken. This approach provided me with the flexibility to probe for depth, ask

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Number of years teaching ranged from 9 to 30.

5

The seven research participants teach in the following areas of study: Hotel and Food Administration, Population Medicine, Psychology, Engineering, English, Landscape Architecture, and Land Resource Science.

additional questions, clarify answers, and order my inquiries appropriately. In practice this approach proved advantageous. While my interview questions were intentionally sequenced, it was more natural to weave inquiries throughout the course of talking. For instance, participants often addressed more than one topic in responding to a specific question. This created openings to other topics and provided opportunity to clarify additional issues as they surfaced during the interview. To maintain an element of continuity between interviews, they each started and concluded with the same three questions.

Interview Guide

Questions used during the interview process were selected from a larger pool of questions generated through a personal brainstorming session. Their development was guided by my research objectives and the literature review. With the aid of my thesis advisor, additional questions were added to the list while others were deleted. Those remaining were further refined and reordered to ensure rich descriptive information from the participants.

In total 16 questions (see Appendix C) were asked of each candidate. The first three set the context of the interview, the next ten addressed key issues of the study, while the last three concerned follow-up issues and demographic queries. As appropriate for each question, a list of probes was prepared to achieve breadth and depth of topic. These probes, like the questions, were developed from my survey of the literature and my own experience. Aside from the interview questions, I also prepared an interview schedule

detailing: personal reminders for each interview, introductory and closing remarks, a summary of my research objectives, and an overview of the interview process. Included with the interview guide (see Appendix D), I further enclosed two copies of the consent letter, recognizing my obligations to maintain participant confidentiality and the faculty member's consent to participate.

Interview Process

For the sake of convenience and to increase comfort of participants, each interview took place in the faculty member's office. The first six were interviewed during a four-week period, while the remaining candidate, due to conflicting schedules, was interviewed at a later date. Following my research guide, each interview began with a short introduction and a brief review of my research objectives. At this point, I made every effort possible to share my enthusiasm for the topic and establish a comfortable climate in which to converse. Prior to officially beginning, permission to record the interview was sought and a recording test was performed. A second tape recorder acted as a back up in case the primary machine malfunctioned. With these steps completed, the consent letter was signed (one for each of us), the tape recorder was turned on, and the interview began.

As mentioned previously, each interview started with the same three questions: What is your philosophy of teaching? How has your philosophy of teaching changed over your teaching career? And, what influenced these changes? These questions alone provided a wealth of data and insight into each professor's teaching journey, setting a context to understand issues associated with implementing collaborative learning. In the process of

answering the introductory questions, each candidate tended to cover one or more topics earmarked for the main part of the interview. In these incidences, a mental note was made and questions, as appropriate, were either omitted or expanded upon at a later point.

As the interview unfolded, spontaneous inquiries were also posed, either for clarification (i.e. student assessment), depth of information (i.e. impact of tenure and promotion on teaching), or personal interest. With the latter, I sometimes found it difficult to stay in my role as interviewer, wanting to engage the participant beyond the research questions. While I consciously curtailed this from happening, my enthusiasm for collaborative learning was revealed through my body language and my genuine interest in their responses. I believe this worked to my advantage, as it created an engaged atmosphere in which to speak. It further contributed to the sharing of rich examples and a willingness, on their part, to provide candid views about the level of institutional support for innovative teaching on campus. Indeed, by the end of each interview our rapport and mutual interest for collaborative learning spilled into post-interview conversation, fostering future contacts and continued enthusiasm for collaborative learning.

Analysis

The analysis of my data was a drawn-out “muddy” process that evolved as I immersed myself in the data. The first step, while somewhat labourious, involved transcribing the seven interview recordings into electronic format. This was completed as close to verbatim as possible with only minor omissions where examples became particularly lengthy or comments of mine were irrelevant. For the former, a summary was recorded

with reference to the audio tape for exact wording.

Once the transcribing was completed, I attempted to familiarize myself with the outcome of each interview. Transcripts were read several times before any attempt was made to either make notes, sequence events of the participant's teaching history, or cluster common elements into the framework provided by my research guide. Following this orientation stage, I returned to the transcripts and began to make notes in preparation of matching data to each question posed during the interview. While this process provided some order, it still left me with the daunting task of managing the data and making sense of it. Feeling overwhelmed, I reevaluated my procedure of analysis.

Originally I intended to approach the data employing a deductive strategy, letting the research objectives direct my analysis of the issues and challenges. Needing to "get a handle on the data" however, I altered my approach with the decision to compose a story about each participant's teaching journey. Wherever possible they were quoted directly to maintain the richness and accuracy of their experience. In writing the stories, key events, various teaching settings, influential people, and noteworthy processes of each professor's teaching journey were noted. Patton (1990) refers to this individualized story writing process as "case analysis".

Drawing from the transcripts, the professors' development as teachers was clarified. At the same time, the identified issues and challenges were clustered into categories outlined in my objectives or added to during my analysis. Those categories included: faculty,

student, environmental (physical) factors, institutional/cultural issues (i.e. thesis objectives), and operational challenges (i.e. assessment). The latter category was added during the analysis phase, recognizing it to be a better fit than one of the existing classifications. Institutional and cultural concerns were collapsed into one category, due to their integrated nature and the limited number of cultural examples. The outcome of this process produced seven rich stories, providing a context to understand and analyse the data in greater depth.

After distancing myself from the story writing process for several weeks, I returned to a clean set of transcripts to gather additional data and greater detail. Having written the first draft of each story, this process was more informed and less time consuming. Integrating the additional material into each case analysis, refinements were made improving both detail of content and fluidity of writing. At the same time, a conscious effort to remove identifying participant descriptors was made.

Following this process, each faculty member received two copies of their individual story and a letter (see Appendix E) asking them for feedback. Points in need of clarification or further expansion were additionally sought. Within two weeks, participants returned their comments suggesting minor, if any, revisions.

Comments from the participants were integrated into a third version of the stories, along with points from yet another vetting of the transcripts. In achieving this goal, data was recorded first on a white board (to facilitate integration of points), second on flip chart

paper (for later content analysis), and third in electronic format as the next draft story.

Through this approach, each case analysis documented the development of each professor's teaching journey, providing a context to understand the loosely categorized issues and challenges identified by the interview process.

With the major revisions largely completed, the stories became the basis to employ cross-case analysis, a "process of identifying, coding, and categorizing the primary patterns in the data" (Patton, 1990: 381). In comparing the development of each faculty member's teaching philosophy and instructional practice, I drew from Denzin's (1989) Biographical Model of Epiphanies. Table 3.1 outlines Denzin's (1989: 129) model.

Table 3.1 - Denzin's Biographical Model of Epiphanies

Level of Epiphany	Description of Events
Major Epiphany	<ul style="list-style-type: none">• major events - touch all aspects of person's life• outcome is immediate and long term
Cumulative Epiphany	<ul style="list-style-type: none">• reactions to events which have been ongoing for a period of time
Illuminative/Minor Epiphany	<ul style="list-style-type: none">• minor events, but symbolically representative of major problematic moments in a relationship
Relived Epiphany	<ul style="list-style-type: none">• effect of events is immediate, but meanings are only given later

Using a modified version of Denzin's construct (1989), I categorized the trigger events identified in each professor's story, according to their impact on the development of each professor's teaching philosophy and instructional practice. Table 3.2 details the model I created to further this approach.

Table 3.2 - Trigger Events in each Faculty Member's Teaching Journey

Type of Event	Description of Events
Critical/Major Incident	<ul style="list-style-type: none"> • opportunity externally provided, introducing faculty to a host of issues, concerns, and insights about teaching and learning at once, leading to reflection and change in their instructional philosophy and practice • incident accelerated teaching journey • event had the impact of many illuminative incidents together
Illuminative Incident	<ul style="list-style-type: none"> • internally motivated or externally provided, leading to reflection and change in their instructional practice and teaching philosophy • impact of events on teaching journey is cumulative
Facilitative Incident	<ul style="list-style-type: none"> • doesn't necessarily provide an avenue for reflection, but is more facilitative or supportive of their development as teachers • i.e. - supportive environment provides climate to be innovative • i.e. - skill development opportunities aid innovation • i.e. - significance of incident recognized later

The outcome of grouping these events, produced a summative table for each faculty member, and a system to check the accuracy and inclusiveness of the fourth and final draft of each case study. Together with the stories, they formed basis of analysis from which I wrote my findings and discussion chapters.

CHAPTER 4 - Their Stories

Introduction

As part of the analysis phase, I prepared a story (case study) for each faculty member. Composed initially as a data management tool, they became a finding in themselves. Not only did they provide a context to understand the identified issues and challenges, but they additionally highlighted the significance of journey and reflection as faculty develop as university teachers. Given their importance in illuminating the data and providing a context to understand the research findings, each case study is documented in the following sections of this chapter.

Sawyer

As a new faculty member lacking teacher training, practice, or experience, Sawyer emulated the example set by other professors to guide his instructional approach. As a result, his early practices were content-driven and lecture-based, reflecting his perceived role as “information deliverer.” As he started to build confidence in his teaching, comfort with his status, and familiarity with his subject material, he realized that his instructional approach “. . . wasn’t a very good way to impart knowledge to . . . students.” Wanting to enhance student learning, Sawyer’s approach to instruction, and hence his teaching philosophy, evolved from “information provider” to “information facilitator” adding an increasingly “participatory” element to his teaching.

A number of events impacted Sawyer’s academic journey. Looking for evidence of

student learning was an early influence. Borrowing student lecture notes and asking them questions, further highlighted that lecture alone was inadequate for supporting student learning. The outcome of this realization initiated a process of reflection, whereby, Sawyer realized that other practices, such as asking questions and providing appropriate feedback, were needed. Over the next ten to twelve years then, he experimented with different approaches and developed his teaching practice.

The pivotal event which broadened Sawyer's understanding of pedagogy and which acted as a catalyst toward the use of new teaching methods, came midway through his career with the opportunity to work with innovative faculty on an international extension project. Preparing workshops collaboratively, from the planning and development stages through to implementation, Sawyer was exposed to pedagogical literature and new teaching practices such as group learning and the discussion method. At the same time, he had a chance to observe other faculty teaching, improve his own instructional competence, and strengthen his program planning skills. As Sawyer related, "getting ready for that workshop opened my eyes to the fact that there was a body of knowledge about this. The fact that it wasn't just hearsay and happened [by] chance . . . , but that there were actual books and literature about this [which] people actually studied in a scholarly way."

The impact of this major event additionally fostered change in his approach to teaching and his understanding of learning and knowledge creation. Through reflection, Sawyer discovered that learning was more than just the presentation of facts. Learning, rather, was the outcome of discussion, knowledge creation, and understanding - something

cultivated through collaboration and a “grappling” with material. As Sawyer shared, “I am convinced that the learning doesn’t go on during the lecture, [but] that learning goes on when the students begin to grapple with the material . . . [while] tackling problems.”

At this stage in his career, Sawyer’s teaching philosophy evolved from “information provider” to “information facilitator,” where the goal of his teaching became the enhancement of student learning. In practice, he started to blend his teaching methods, cultivating a collaborative approach to instruction. Buzz groups were interspersed between lecture; group assignments were introduced; lab settings were more participatory; and students were encouraged to work together. As Sawyer related, “. . . there is a lot to be gained by having a partner or two.”

Asked about collaborative learning, he defined it as an active learning process involving discussion and the engagement of students as they create knowledge through a discovery process. He particularly associated collaborative learning with his graduate students, who developed knowledge through their research discoveries and their joint intellectual effort with Sawyer.

To prepare his students for collaborative learning, Sawyer drew from his international extension experience and the resulting literature he discovered. According to Sawyer, he pulled bits and pieces from the book, Learning in Discussion, to guide conversation in his classroom (i.e. nominal group technique). Building on exercises he devised, he explained to students how discussion would be used in the course, how assignments would be

carried out, and how his role in the context of teaching and learning would be facilitative. In terms of group skills, he built upon those already introduced by departmental faculty, who similarly taught in the same stream (i.e. specialization) and with the same set of students.

In making the transition from “information provider” to “information facilitator,” Sawyer shared various incidents which made the process more fluid. At the beginning of his university career, for example, he valued the opportunity to teach upper year students - experienced learners - as it provided him with a better vantage to gain experience teaching and confidence in his ability. Sawyer further appreciated having an established network of colleagues whom he could talk to and receive objective feedback. Working with other departmental faculty, who similarly taught in the same specialization of study, additionally provided opportunities to collaborate and develop student skill in team learning and effective group work settings.

In terms of students, a positive rather than a negative reception to collaborative learning made Sawyer’s transition easier. He attributed their lack of resistance to the fact that most of his classes involved upper year students (2nd to 4th year) studying in the same academic specializations or graduate students who seemed to have “. . . got the message and moved on.” As Sawyer explained, fourth year students don’t need good teachers. First year students however, need a different style of teacher. In reference to the latter, Sawyer noted the value of University College Connection in preparing and supporting first year scholars in higher education.

While the above-mentioned incidents made the transition to collaborative learning more fluid, Sawyer also experienced a number of operational challenges. As Sawyer explained, good collaborative practice takes a fair bit of thought and planning, not only in designing the course and providing appropriate in-class time for group work, but also preparing the students for the learning setting. He also noted that discovery learning took longer, and needed to be paced relative to other priorities of both instructor and student. Other concerns dealt with equitable assessment practices. Should students be graded individually or as a group? How much, if at all, should peer or self-evaluation be weighted? He also worried if students, when placed in collaborative settings, relied too much on the efforts of the group, failing to master the material adequately themselves. Class size was another issue. As Sawyer shared, “I think there is some constraint in . . . terms of class size . . .” In classes, therefore, of 200 or more, Sawyer tends to implement less collaborative practices, focussing more on the lab as a setting for active student learning. As a result, Sawyer implements careful planning and continued student surveillance.

Asked about the physical environment, Sawyer sighted classroom arrangement as a major constraint to effective collaborative learning. As Sawyer noted, “there is a certain amount of noise with good collaborative learning . . . You need to be able to gather around tables and get yourself physically placed . . . In the lecture hall, aside from two minute buzz groups, I think you need some physical arrangement where you can gather together and spread out your papers.” Fortunately, Sawyer is able to obtain the physical facilities he needs. He does note however, that “if everyone started to do more of this, I expect that

might be a problem.”

From a faculty perspective, Sawyer highlighted the fact that group or discussion learning, as he prefers to term it, is “scarier” for beginning teachers. “...You feel as if you’re losing control [and that] the game is wide open. You don’t know what this group of three bright students together might concoct . . . or [what] question they might ask . . . In a lecture setting you have got control. You’re delivering and you know . . . [that] there won’t be any surprises.” From his own experience, Sawyer shared: “it wasn’t until . . . I was getting more comfortable with my status and [the] material that I was willing to take those risks . . .” As such, he questions the ability of junior faculty to explore teaching innovation without proper institutional supports. “For them to stumble along and take risks is not a good idea at the beginning.” In response, Sawyer advocates a “buddy system” where new faculty observe innovation in practice and receive support in developing their own teaching style and instructional philosophy.

Aside from his own needs, Sawyer pointed to the needs of his students, acknowledging many having preferred learning styles contrary to the “collaborative way.” He also discovered students, like faculty, need orientation to collaborative learning. He particularly highlighted first year students, who tend to be uncertain of their abilities in higher education, needing opportunities to build their self-confidence as learners.

Focussing on the institution, Sawyer shared mixed concerns for the level of recognition and support offered by the University. Pointing to funding cuts which have contributed to

decreased faculty numbers and increased student enrollment, Sawyer feels pressured in meeting academic demands, dealing with larger classes, continuing with his scholarly work, and maintaining integrity in his teaching. He shares, “the present culture says that if you do an outstanding job of teaching and a mediocre job on your scholarly work, this would be problematic at the tenure stage . . . The cultural message is to do well at your scholarly work.” As such, Sawyer believes the institution could do more to support faculty and model collaboration, starting with better end-of-semester evaluations and more public endorsement of Teaching Support Services.

Sam

Sam’s current philosophy of teaching operates from a constructivist approach, where he plays a facilitative role in the classroom. He’s there to stimulate and motivate students to learn, to ask them questions (not give them the answers), to channel their learning into different directions, and to steer them toward various resources. Providing opportunities for students to develop skill in analysis, synthesis, and problem solving is also important, as is their ability to communicate their learning in a public forum. This approach differs considerably from his early instructional style, when he delivered lecture-based courses filled with information and facts. Sam attributes his former approach to teaching, to inexperience and a lack of familiarity with the subject matter. As Sam shared, “. . . a lot of what I did was lecture on the subject matter to the students, because this is what I was struggling with [myself].”

Over a period of time however, his practice and approach to teaching evolved. Increased

familiarity with course content and comfort in his instructional role, motivated Sam to make his teaching more interesting. As Sam pointed out, “. . . if you’re not excited about the material, there is no way you’re going to get the students excited about the material.” Content coverage also proved challenging, making Sam realize that there is “. . . no one way you can get across all of the material . . .” As a result, he began to examine his discipline critically, asking questions such as: “How do we think about [xxx]?” and “What are the ways we organize how we think about this type of information?” In the process, he discovered theories and frameworks to explain key concepts to his students and began to understand the importance of learning in the public domain. While Sam continued to lecture in his classes, he provided more examples and experimented with different assignments that were more applied and involved students in their learning.

Another incident which influenced Sam’s philosophy of teaching was the opportunity to team teach with a colleague from another department. The experience, he said, created synergy in the course’s development, as both faculty members were committed to designing a course which supported student learning, fostered understanding about the discipline, and provided opportunities to articulate their understanding in a public forum. The latter in particular reflected discipline practice which approaches problems through a combination of science, politics, and public debate.

At about the same time Sam began co-teaching, he was also working with a group of faculty from across Canada, to develop and implement a special course in XXX. This experience contributed in a major way toward Sam’s teaching. It provided him with

opportunities to strategize and network with colleagues, experiment with different teaching approaches, gauge student reaction to various teaching styles, develop subject matter, design student assignments, and gain insight into the teaching and learning process. It further highlighted the importance of training students in preparation for learning activities. Finally, the experience provided opportunity to initiate use of various group activities (i.e. roles plays, town hall meetings) facilitative of skill development in analysis, problem solving, articulation, interpersonal communication, critical thinking and synthesis within a public forum.

The opportunity to employ what he learned from the collaborative planning experience, occurred with the departure of his teaching colleague. With the loss of his partner and the support of her department, the course was in limbo and at risk of being cancelled. Feeling he had nothing to lose, Sam decided to run the course experimentally. Drawing from his collaborative experience and the ideas developed with his former colleague, Sam restructured the course focussing a major part of the students' learning around the implementation of a town hall meeting. As this was practice in Sam's discipline and provided opportunity for students to learn valuable skills, he split the students into groups (i.e. government, consumer, farmer, industry) and asked them to take the best science they knew and argue their position.

The overall experience was very positive. It affirmed the risk Sam assumed in trying something new, and it tied in with his emerging teaching philosophy valuing active student learning and knowledge development expressed in a public forum. As Sam shared, "what

they learned to do was not just analyse and take it (debate) apart, but synthesize and pull everything together. It doesn't matter in the end just how much you know, but how you can pull it together and make your argument . . . They can disagree with me, but they have to argue their point well."

The latter statement reflects Sam's emerging understanding of knowledge creation, influenced by his interdisciplinary research and his discussions about co-generation of knowledge with his fellow researchers and colleagues. The cumulative result was an acceptance that knowledge creation is a social process of meaning construction and an understanding that "we are shifting away from . . . these knowledge authorities." The implications of his experience and new found understanding was an evolved teaching philosophy, built on the premise that students, ". . . if they know how to ask the question, the details they can look up in books. The ability to pull together and argue, you can't get that out of books, you have to do it." As a result, Sam began to apply his philosophy in the classroom, launching more collaborative learning⁶ activities.

Today, Sam implements a repertoire of assignments, teaching approaches, and resources, including: town hall meetings, lectures, guest speakers, team projects, essay assignments, investigations, and short answer final exams. While most students like the variety and

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Collaborative learning - "part of what it means to me is that the students need to be actively involved in the learning process. I'm here to provide advice, guidance, ask them questions, ... stimulate them, prod them, give them information when they can't get it from other sources, [and] guide them to it when I know it is there." It also means, that "...they get ahold of information that I don't have,...so it is a learning process for me as well."

appreciate the learning styles they cater to, he recognizes some students prefer lectures to team projects. Sam attributes their feelings to the fact that many “. . . students have particular ideas of what they’re going to get out of . . . class . . .” He further notes that “if you do something different, students get upset because you’re the exception . . . They’re so busy, they do not have time to second guess what this professor wants versus what all other professors want. They get annoyed with innovation.”

To address these concerns and prepare himself for teaching, Sam turned to his colleagues and Teaching Support Services. He shared, “I went over to the learning centre to get information on how to evaluate . . . group learning, which I did not know anything about. The truth is . . . most of us don’t have a background in education. You kind of learn by the seat of your pants.”

To prepare his students, he talks with them about his approach to teaching. He also discusses the course in general, and shares ways to approach the various course assignments. To help them with the applied nature of assignments, he invites guest speakers to provide insight and direction. To help students with team projects, he talks about group work and refers them to the reserve material in the library. For the latter, he recognizes the need to structure group skills training more formally, rather than leave students to their own devices.

While Sam enjoyed success with his teaching, he identified several challenges over the course of his teaching career. Freedom was one issue Sam identified in terms of

curriculum development. He says, on the one hand “. . . you have complete freedom to do whatever [you] want, on the other hand you’ve got very little freedom . . .” He puts it down to finding a balance, though he questions the ability of some faculty to be innovative and collaborative when “. . . the whole curriculum is very structured, . . . [and] the overall institution determines what [the] skills are and the way [they should be taught].”

Asked about the element of risk and its impact on teaching, Sam expressed little concern. He replied, “I am a full professor with tenure. Now I am more free try out new ideas.” Reflecting upon his experience as a junior faculty member, he conceded he was more traditional both in his research and teaching. He also noted that he “. . . wouldn’t have tried as much before tenure,” especially if he believed that other faculty would think his practices - “weird.” Now of course, he’s “. . . become more experimental, [taking] more risks as [he’s] gotten along in terms of [his] university career.”

While Sam is more experimental and interactive, he continues to have concern about faculty workload, professional expectations, and the time available to devote to teaching innovation. As Sam shared, when faced with trying something new “you have to say [to yourself], if you’re going to do this, what am I not going to do?”

From an operational perspective Sam points to the issue of assessment, looking for better ways to evaluate student learning, establish learner comfort with peer assessment, ensure student learning, and reinforce mastery of the subject material. Class size is additionally challenging, as is having the appropriate amount of time to plan active learning

experiences, design innovative assignments, and prepare students for collaborative learning settings.

Asked about the physical environment, Sam replied: "I guess I feel like . . . you can work in just [about] any room setting. To me that's less important." On the other hand, he did admit that it's nice to teach in new facilities.

In terms of the institution, Sam believes the university could be more supportive of teaching, noting that "teaching, until very recently, has been irrelevant. Unless you got bad reviews from students, it really didn't make a difference." While he recognizes its growing importance in the last few years with the teaching dossier, and while he's seen evidence of change in his own department, Sam is frustrated by administrative red tape. For example, in his efforts to co-teach with a faculty member from a different department, a number of issues had to be addressed before the course could be set in motion. Two sets of course numbers in the undergraduate calendar had to be assigned; students had to register under one of two different departments; and course funding had to be negotiated between units. The overall message he felt this situation conveyed was that "the university does not deal well with interdepartmental, interdisciplinary stuff, . . . and that the interdisciplinary stuff is always considered kind of marginal . . ." Given government cutbacks in funding, Sam questions why the University fails to embrace or support more interdisciplinary, collaborative initiatives.

Paul

Paul's early teaching experience as a lab instructor at the graduate and undergraduate levels, embodied traditional teaching practice involving the dissemination of knowledge and facts. As a PhD student, where he had the opportunity to observe his advisor instruct and help students solve problems, Paul began to understand that teaching entailed more than just the provision of facts. This insight, coupled with practice and experience teaching, contributed to an emerging philosophy that engaged students in the learning process and encouraged them to experience the material personally.

Entering the professional realm of full-time teaching however, Paul felt insecure in his new status of junior faculty member and initially implemented a traditional approach to teaching. He attributed these feelings to his young age and the challenge of teaching graduate students older than himself. He particularly expressed the need to "... show them [his] stuff ..." and demonstrate his worth as a teacher. Bowing to his insecurities then, Paul reverted to the "... same mode of telling ..." believing he had to know all the answers.

Two incidents early in Paul's career helped initiate change in his philosophy of teaching and instructional approach. The first one came with the realization that his students were not learning to the degree and level he had anticipated. through his current teaching practice. The second incident took place when he realized that "... the students learned better [and were more excited if he] ... didn't know the answers ahead of time. "

Making this connection, Paul realized that the students had to "... experience it

(learning) in other ways” and through other modes of teaching.

In discovering what those modes of teaching might be, Paul turned to his colleagues for advice and attended various conferences and workshops for new ideas, such as: Problem Solving Across the Curriculum, STLHE⁷, and Show and Tell⁸. As Paul related, “I kept going to things like that, and I would ask myself why was that such a great session? Then I would start picking things out.” At one conference in particular, Paul referred to the excitement he felt at being in a populated session of 200 to 300 people, and experiencing the successful use of small groups. This experience, he related, opened his eyes to the various possibilities for his own classes, leading to several years of experimentation with different teaching approaches.

During this period of exploration, Paul “. . . wasn’t so concerned about the theoretical underpinnings, [he] was just looking for techniques” - discovering in the process “. . . what worked and what didn’t work.” The relevance of theory came later, when Paul attended a college-sponsored conference on Teaching Excellence. Having the opportunity to speak with other faculty about different educational theories and instructional approaches, he began to make connections between the two. In reference to collaborative learning however, it wasn’t until a guest faculty member (at the conference) started talking about collaborative learning that he finally realized he had a name to identify his current

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STLHE = Society for Teaching and Learning in Higher Education

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Show and Tell (now called Teaching and Learning Innovations) is an annual conference hosted by Teaching Support Services at the University of Guelph.

approach to teaching. Before the conference, he had not been “. . . aware of it as being called anything . . .” His discovery was profound, affirming where he fit in and what he had been doing. It also instilled a desire to reach out to the literature available to him.

As a result of his discovery, Paul slowly modified every aspect of his teaching to reflect the practices of collaborative learning. In the process, his philosophy of teaching evolved from providing facts and information to working collaboratively with students, “. . . helping [them] . . . learn how to learn” and develop critical thinking skills. At the same time, he began to introduce various problems during class time, learning as much from the shared discovery process, as his students.

In making the transition toward collaborative learning, he shared a number of instances which hindered the process. In one incident, for example, he referred to a student who stood up in his class and shouted: “who the hell do you think you are?” Other students, he stated, complained at thinking for themselves saying: “that’s your job! You should read those books and . . . tell [us] what information [we] need to know.” Paul certainly “. . . found out very quickly what the students would accept and what they wouldn’t, [realizing in the process] that [he] had to provide some direction, but enough latitude so they could do a lot of it themselves.”

In retrospect, he attributes their resistance in part to its newness, but also to student preference for other learning styles, lack of cognitive maturity, and student passivity. He additionally believes that the traditional teaching practices of other university faculty are

detrimental to collaboration, and conform more readily to many students' expectations of teaching and learning. Paul is persistent though and believes "the majority of them very quickly get over that [resistance] and enjoy the freedom." His positive course evaluations would suggest this to be the case.

Now of course, he recognizes the mind shift students undergo as they adjust to collaborative learning in place of the individual and competitive efforts which secured them a place at university. As such, he takes precautions to prepare his students, orienting them to his teaching approach while outlining learner expectations. In many cases, for example, Paul says to his students: "in this course, what we are doing is learning [and] working together." He also implements a learning styles exercise, hoping to underscore the diversity of learning styles and initiate discussion on how people learn differently. Finally, he clarifies the role of students and his expectations for the course.

In practice, Paul incorporates a variety of teaching methods, having discovered students perform better with a balance of both structure and latitude. In designing courses then, he gives special consideration to his audience of students. With his graduate students, for example, Paul readily uses collaborative learning, easily accounting for 2/3 of his teaching. With his undergraduates however, Paul limits the amount of collaborative learning to approximately 1/4 of the time. He further allows his graduate students greater course input, incorporating various suggestions they put forth (i.e. course readings). In either case, his approach to teaching reflects his philosophy of helping students learn how to learn and become critical thinkers.

Other difficulties with innovative teaching concern the physical environment. In his undergraduate class of 70 to 100 people, for example, he's challenged by the stationary desks and tables. This, he feels, detracts from the mental space he would like to create. "They walk in and they see the very formal setting with the professor at the middle of the front of the room . . . They're not thinking collaborative learning. They're thinking [they] can sit back, take some notes, and hear what this person has to say." Recognizing the impact of the physical environment, Paul prefers the classrooms in Landscape Architecture which lack structure, offer greater flexibility (i.e. moveable chairs and tables), and lend better to collaborative learning.

From an operational perspective Paul points to the issue of assessment. At the undergraduate level, where he has had less experience teaching, the process of examination has proved frustrating. "I somehow can't get my mind around the idea of doing collaborative learning and then setting an exam where you ask specific questions," he says. Paul attributes his frustration to his understanding that "realistically, students learn different things in his class and that comparing them to one another and assigning a grade is contrary to the spirit of collaboration." He does try to be flexible however, emphasizing learning, offering feedback on assignments, allowing students to negotiate grades, and encouraging learners to take a chance without being penalized. In the end though, he continues to feel uncomfortable standing in judgement of students.

Other frustrations are attributed to faculty who fail to recognize collaborative learning as a viable instructional option. As Paul discovered, some professors view his approach to

teaching as a “copout” or “not doing [his] responsibility.” Paul finds this experience frustrating, making him all the more appreciative of the support network he’s established. For example, if he comments to a colleague that his class “totally bombed,” he doesn’t have to worry about other faculty reporting it to the P&T committee. Paul similarly appreciates the ability to say, “I wonder what went wrong?” and then receive feedback from his colleagues to make improvements.

From an institutional perspective, Paul points to the Promotions and Tenure Review committee, believing that “if they really don’t understand the value of [innovation] or appreciate what you’re doing, it’s to your detriment.” While he acknowledged this as a problem for many tenure-tracked professors, he himself did not find it so. Paul attributes this standing to his positive course evaluations, his comfort with the teaching role, and most importantly, his strong base in research which guaranteed his status. Had tenure been evaluated more heavily on the basis of teaching however, he admits he would have been more careful in his instructional practice. As such, he appreciates the safe environment he has established, especially in light of others who fail to respect his teaching philosophy or appreciate the hard work that goes into the preparation of his collaboratively designed classrooms.

Having identified these challenges, Paul believes the culture of the university is changing. As a member of his departmental Promotions and Tenure Review committee, he’s beginning to see more faculty members acknowledge the importance of teaching. In fact, he says, “we are starting to see the occasional person . . . promoted to full professor,

based primarily on their teaching.” While these developments are encouraging, he also thinks the university has a ways to go in supporting faculty and in providing incentives, a safe environment in which to teach, and proper resources (ie. classrooms) to effectively implement innovation.

Overall, Paul believes “. . . these sorts of things have to come from individuals hearing about a colleague, trying some of their ideas, listening to what they have to say, and so on. Top down, I don’t see it!”

Neluka

Neluka’s philosophy of teaching operates from two premises: her own particular learning style and her personal interests. For her, effective teaching comes from within. Neluka sees herself as a conceptual learner, one who “. . . needs to understand how the pieces fit together.” As such, both conceptual and strategic elements are integrated into her teaching. Delivering facts is not the goal of Neluka’s current philosophy. In fact, to teach to Neluka, is to “inspire, to motivate, to provide the conceptual framework, [and] to show enthusiasm for a subject.” Ideally, she wants to develop their conceptual ability, promote critical thinking skills, and facilitate understanding of the course material.

While Neluka’s philosophy has been relatively consistent throughout the majority of her teaching career, her early experiences were more indicative of lecture and the provision of information and facts. She attributed her predicament to inexperience teaching and a need to establish both comfort and confidence with her subject material and instructional role.

Indeed, at the mention of her early teaching Neluka cringes. She relates, “. . . it was so scary when [I] think what I did to those poor students. I was straight out of a [XXX program]. I had never had any exposure to pedagogical issues, and I really didn't know what I was doing. I had a huge class . . . and I did lectures . . . [with] overheads absolutely loaded with facts . . .”

With time and experience however, Neluka's teaching evolved. An early event (end of first semester), pivotal in her development, occurred with the opportunity to join a team in the planning and implementation of an adult education program for professionals in her field. Through her involvement, Neluka was exposed to the practice of classroom facilitation, the experience of team teaching with innovative faculty, the use of case method and discussion approaches to instruction, the learner's need for a comfortable and safe environment for sharing experiences, and the benefits of working with committed learners. For the first time, she was also introduced to pedagogical issues and approaches. The experience additionally highlighted the value of surveillance - a strategy Neluka uses in her current teaching practice to choose theory with which to illuminate student learning and personalize their “ah-hahs”. Overall, the entire experience was “intellectually challenging” providing the boost she needed to initiate change in her teaching practice and instructional philosophy.

Two other happenings additionally influenced Neluka's teaching path. The first one involved the designation of a mentor; the second, an opportunity to receive training in the case method. In both instances, they were initiated and supported by her department. The

former provided Neluka the opportunity to network with other faculty, team teach with another professor, and develop her confidence and comfort working with the case approach. The latter contributed to her growing skill and application of the case method. These experiences, combined with her new role as reviewer for an educational journal in her field, fostered Neluka's instructional practice and her overall teaching philosophy.

Neluka attributes her commitment to teaching, in part, to her department. "I guess I have been fortunate to have a supportive department, . . . [and work in] a culture that supports this kind of teaching." To demonstrate, she refers to her departmental teaching awards - a process she supported and encouraged while chair of her department's Teaching and Learning committee. Viewed as a means to promote the value and seriousness of good teaching, students are encouraged to nominate professors who demonstrate teaching excellence. Less overt, but equally important, if not more so, Neluka feels encouraged and supported by her peers, who like her, ". . . believe very strongly in experiential learning and participation in their courses." Considering "faculty are such independent creatures" who tend to emphasize course ownership over curriculum responsibility, she stands strong with her shared ideology and commitment to innovative teaching.

Transformed by her experiences, Neluka's courses took on a different quality. Case method largely replaced content driven lectures, as she attempted ". . . to recreate the [professional education] . . . experience within the [university] classroom." At the same time, Neluka assumed a facilitative role, providing ". . . a conceptual frame work [for students] to position comments . . . at a deeper level of understanding." She also initiated

a process of encouraging students to share relevant cases, while at the same time, incorporating “a lot of experiential activities, role plays, [and] games . . .” In essence, Neluka’s classes became more energized and more interactive, believing “. . . that if you struggle with an issue, your mind is far more receptive to the information [and] . . . the benefit of knowing it.”

To prepare students for her new approach to teaching, Neluka uses her first class meeting to share her teaching philosophy and outline her expectations of both the class and the students. To prepare herself, Neluka assembles a course package before the start of each semester, drawing heavily from the case examples obtained through her continued involvement with the professional adult education program. As a reviewer for an academic journal in her field and as a regular attendant at professional conferences, she additionally stays abreast of current practices and issues in her field.

Asked about collaborative learning, Neluka does not characterize her philosophy or instructional practice as collaborative. “I don’t think that if it hadn’t been for your . . . study that I would have said . . . my process is a collaborative [one], . . . even though I think you could argue [it] to some extent. [Those aren’t] . . . the words I would use for it. I would describe it as more conceptual, experiential learning.” Interestingly, Neluka’s principles of teaching and learning embody those of collaborative learning, even though her language reflects that of her department and her professional teaching discipline.

In regards to teaching barriers, Neluka highlighted many challenges she encountered.

From an operational perspective, she addressed grading practices and student assessment, admitting no magical formula with her use of various evaluation instruments such as group projects and take home exams. “I have never found a grading scheme that I can say ‘yes,’ this is it [she says]. Because with group dynamics, . . . you always have some students who do more work than others, and those who take advantage [of it].” She also expressed discomfort with some assessment practices, sharing: “I know with these confidential peer evaluations some people just tear the strips off each other, [while] other people collude and say friendships are more important than accurate assessment . . .” To address these concerns then, Neluka uses a variety of assessment techniques, providing room for student feedback and latitude in marking. Still, it’s a constant struggle for Neluka to determine what level she should teach and assess her students when designing courses.

As a faculty member, Neluka identified a number of challenges. The demands of course design and the need to be current with the knowledge and theory of her field, were ones she particularly emphasized. “You have to be absolutely up-to-date and comfortable with your theory . . . It’s not canned stuff,” she says. For Neluka, her mini lecture at the beginning of the class helps orient both herself and her students to the critical points of discussion, before examining case studies. “Now, [she says], I have such a comfort level and confidence with the material that I really feel it is my job to facilitate classroom discussion, provide a summary at the end, and respond to [student] questions. I find it much more interesting and stimulating.” This is quite the opposite from her early teaching experience, where she spent hours planning a class and writing out her speech.

In the context of students, Neluka is discouraged by many students' lack of classroom preparation and passive approach to learning. "...Their preparation level prior to class is virtually nonexistent. I have given up assuming that they will [be prepared]" In response, Neluka now prepares a 20 minute lecture summarizing key points at the start of each class. Reflecting on the experience, she questions if their lack of preparation is an outcome of their maturity level. "I often wonder if they lack the maturity to understand how this approach can be a powerful learning opportunity for them, [or if they] . . . only pay attention when I am lecturing?!" Contrasted with her graduate students, Neluka sees a considerable difference in their motivation, experience, and willingness to learn. "At the graduate level, [she says,] . . . I have people who are more highly motivated . . . with actual XXX experience, . . . practical knowledge to draw on and relate to, [and] . . . personal anchors" from which to learn.

Indeed, she questions the level of priority learning has for many of her undergraduate students. She laughingly shares, "I often wonder . . . if the course doesn't provide the framework for them to situate their social lives." Neluka puts it down to personal accountability, recognizing if absent, ". . . when push comes to shove, students have other priorities." She does recognize however, the competing needs of students in higher education. Regardless, she finds the situation frustrating and is sometimes tempted to ". . . experiment for the first time in many years, actually doing a midterm and a final with multiple choice and some short answer [questions]." She further questions if she is doing the students a ". . . disservice by trying to stay true to [her] personal philosophy and ideology of education, given their reality."

From an institutional perspective, Neluka identified class size as a major challenge both in terms of group dynamics and in orienting students to group learning. “When I get over 70 say 80 or 100 [she shares], I always have the groups at the back who are much more interested in discussing their social lives.” Class size, she says, also creates complications (political red tape) when obtaining appropriate classrooms to teach in, admitting: “it’s tough, because a lot of classrooms were designed on-campus . . . with a lecture format in mind . . . and there is . . . a demand among faculty to get [good] classrooms.” She additionally finds the semester structure challenging, as it fails to provide adequate time to foster commitment or develop community among her students. “It’s not like the working environment where you are concerned for other people . . . ”

She further questions the university’s system for reward and recognition. While her department’s hiring committee is looking for evidence of teaching (i.e. awards, letters of recommendation) and scholarship, she sees evidence to suggest that the number of publications a faculty member publishes, is the more deciding factor. She additionally questions “the critical evaluation of the research,” noting its absence at the tenure and promotion level. Even with the current use of teaching dossiers, Neluka is amazed at how little they are emphasized or reinforced.

On a positive note, Neluka highlights the following: “given the nature of a lot of what Guelph’s program are, I really do think Guelph is a university whose time has come . . . We are so connected to external groups . . . that relevance and application are integral to many of our programs. Experiential learning flourishes with such an environment. Even

though there is a fine line to tread between . . . education and training, . . . I think Guelph has the right balance [to succeed].”

Leslie

Leslie articulates her current philosophy of teaching by identifying the learning goals she wants her students to achieve. Central to her position is the idea of student transformation - not so much in being totally different people then when they started, but that being in the class made a difference to them in terms of looking at the world differently, more openly. Leslie supports this transformation by encouraging her students to take greater responsibility for their learning, as she believes they learn better when they “grapple” or “get dirty” with the subject matter. Oral presentations and writing assignments are two methods she implements, believing the ability to communicate effectively in a public forum, demonstrates understanding of the learning process.

As a junior faculty member, new to her profession and the course curriculum, Leslie operated from a mode of survival. In order to cope, she looked for the simplest mode of teaching - mainly lecture - where she spoke and the students took notes and wrote exams. With practice and experience however, she became comfortable with the course material, confident in her ability to teach, and ready to explore alternative pedagogical practices in-line with her evolving philosophy of teaching. She also “.. started to think what would make [the subject material more] interesting for them and for me? And . . . what kind of responsibility can they take on so that I don’t have to?”

From a course management perspective, Leslie explored methods to increase student responsibility and decrease her own, as the time needed to prepare detailed course lectures was considerable. To her benefit, exploration led to the realization that students, when they start taking on work, similarly assume greater responsibility for their learning, and develop the confidence to work harder. This realization was an early influence and an impetus for change in her teaching.

Recognizing some courses required alternative approaches to lecture and different assessment techniques (i.e. two midterms and a final) was another. Referring to her XXX course, she expressed the challenge she experienced upon discovering that "she wasn't getting the best out of them (the students)." In essence, they were treating her course like so many others, where the bulk of work and/or study is left to just before the exam. As a result, Leslie restructured her course to promote measured workload, continued and involved learning with the subject material, and ongoing feedback between herself and the students.

Perhaps the most influencing factor leading up to her use of collaborative group practices, was her recognition that the culture of higher education worked contrary to her desire to promote human relation skills, increase student interaction and responsibility toward learning, and provide group learning opportunities. This perception became evident when she shared, "I believe that working in a team really does make a difference. A lot of stuff is done in teams . . . [and] I want them to have more of that experience. . . At university, we are great at the individual. We compare them to each other, yet that doesn't prepare

them for the world of work where there is growing emphasis on work place teams and shared credit."

With the support of her department, Leslie increasingly emphasized team learning in her classes. At the same time, she obtained the resources (i.e. Teaching Assistants) to support her students. Drawing from her group dynamics background, Leslie took the time to build relationships with her students and prepare them for the challenges they might encounter. As a result, building a comfortable climate within the classroom was an early goal. As Leslie explains (depending on class size, i.e. 50 or less), "I spend the first class period having them introduce themselves, saying where they kind of fit in [to] the university scheme of things, and what it is they want out of the course." In addition, she informs the students that her class will not be typical of others courses. She further discloses about herself and her teaching philosophy, after which, she reviews the course syllabus, outlines the schedule of assignments, and highlights the importance of strong group dynamics. Finally, she refers them to her out-of-class group training session, where student fears of group work are addressed, past group experiences reviewed, characteristics of good and bad teams determined, commitment to the project set, and group expectations established.

Asked about collaborative learning, Leslie did not identify her approach to teaching as collaborative. Reflecting the language of her discipline, she preferred the terminology of "group work" or "team work." Even so, her conceptualization mirrors many principles of collaborative learning. For example, her desire to "cultivate a recognition that each person brings a piece of their own expertise and knowledge to the group, and [that] it is valuable

[to completing] the picture," supports the idea that knowledge is socially constructed and founded on experience. Leslie also recognizes the importance of distancing herself as the central figure in the teaching and learning process. She notes, "an instructor has to be active in that giving-up process." Overall, she wants students to move beyond feeling: "I am the only one that can do it." Instead, she prefers to encourage student recognition that "people can accomplish more . . . [if they understand that] . . . cooperation and collaboration will get you further."

While Leslie embraces collaborative learning, or group work as she prefers, she admits that the transition process was not easy. Many students, she discovered, were inexperienced with group work and had different learning styles. Workload also proved to be an issue, as many students were frequently "pissed" with her since she required them to work consistently. Fortunately with time and proper orientation to group learning, she found most students adjusted. Beyond workload, lack of motivation and a passive approach to learning also proved problematic. "I wasn't getting the best out of them [she said] . . . They were trying to treat it (her classes) like they do other courses, which is [to say], I don't have to do any work until a few days before the exam." Leslie addressed these issues by redesigning her courses to keep students consistently involved. Finally, she shared an observation that students increasingly expressed a "you owe me" attitude. Reflecting upon this sentiment, Leslie wondered if maturity and the cost of education were contributing factors.

As to her own challenges, Leslie struggles to find the time to spend on teaching, while

balancing administrative duties and scholarly writing. She finds it burdensome and wishes the University took greater effort to support faculty. Reflecting on her teaching career, she further points to the “giving up process” that faculty must undergo as they decentralize their role in the classroom, take greater responsibility toward the curriculum, and focus less on course ownership.

In regards to the physical environment, Leslie thinks University facilities are less than adequate. The MacKinnon building, she feels, has poor seminar settings with room temperatures either too hot or too cold. Fluorescent lighting is another point of contention, as it impairs her view of faces, making it difficult to gauge student reaction or learner understanding of the subject material. She particularly finds this problematic in large lecture settings.

From an operational perspective, Leslie points to assessment. While she implements both individual and group projects, and provides latitude to students which allows them to divide their group mark equitably among themselves, she’s concerned at other faculty who similarly use this approach. Professors who grade students individually for work completed as a group, is viewed negatively by Leslie. She believes the practice is destructive and “ . . . ruins the whole point of the group experience.” In fact, Leslie questions whether members of academia understand the nuances of collaborative learning, expressing concern with faculty who use this method as a classroom management technique for oversubscribed courses (institutional issue), instead of quality student learning. Other operational barriers include: lack of faculty orientation to group learning,

lack of preparation time to design effective courses, large class sizes, and the need to train students in collaborative learning settings.

In regards to the institution, Leslie questions the level of faculty support, acknowledging that "it's easier to work in an environment where they formally recognize and appreciate what you do." Fortunately for Leslie, she has a "phenomenal" department that provides the supports and resources (i.e. teaching assistants) she needs. Even her department's Promotions and Tenure Review committee, recognize the importance of teaching and promote on the basis of two streams - one being research and scholarship, the other being excellent teaching. As such, Leslie feels lucky to be a member of her department, given colleagues from other disciplines who share surprise at the level of support she receives. Indeed, their disbelief suggests Leslie's situation is the exception across campus, not the rule.

Outside of her department, Leslie questions whether teaching is appropriately acknowledged as a core requirement of being a "good academic." She maintains "the university needs [to] consistently support . . . creativity, by evaluating teaching as important as research, and providing the financial and temporal encouragement [it needs]." At the same time, Leslie believes the University expectation for service should receive greater recognition as the most collaborative of all faculty responsibilities.

On a more positive note, Leslie believes the culture of teaching is changing for the better, believing that "if you want the most out of . . . faculty, you help them find the places in

which they thrive best, and in which their skills are best used and most challenged."

Danielle

Danielle's philosophy of teaching has changed little since completing her PhD program and beginning her teaching career at the University of Guelph. Rather, her experiences since then have provided her "the sense of the possible and [instilled] the confidence to work toward it." As such, her philosophy does not embody a set of techniques, but instead a collection of principles guiding her teaching practice in relation to "... contingencies of the classroom [and] in conjunction with ... contingencies of [her] workload." Therefore, she comes to class with the "... expectation that students will be as equally committed to the project of higher education ..." as her, asking them to articulate a philosophy of learning just as she articulates her philosophy of teaching.

Thus far, her experience has taught her that "students really flourish in that space between self-direction and direction from outside." She further acknowledges that "it is important to know when to accept protocols and when to question authority, [because] marginal or different knowledges are just as important to the teaching and learning experience as the official knowledges." As such, it is a part of her "... philosophy of teaching (as minimal as she thinks it is) to move back and forth between those positions of teacher and learner, authority and collaborator."

In the process of articulating her philosophy of teaching, Danielle referred to many incidents which influenced its development. The personal, she revealed, has always been

an important element. "I have always been very personal in the classroom because I am a very social person." She attributes this to her rural background, her desire to interact with other people, and her need to break down those official barriers. Her graduate experience further highlighted the importance of the personal. With her PhD program, for example, she "... learned very quickly that survival and productivity were predicated on the fusion of the personal and the academic" and the development of a safe environment.

Building on the idea of a safe environment, Danielle pointed to the value of doing her B.A. and M.A. in the same department. For her, it "... really made a difference toward [her] comfort level and safety level, [such] that if [she] did or said something personal ... that it was safe to do that, that it would not be dismissed as emotionalism, ... [and] that it would be understood as a valuable part of academic transactions." This climate, she believed, created a space for her to grow and develop as both a student and a teaching assistant. It further established a familiar and safe environment from which to begin her teaching career as a sessional instructor at the University of Guelph. Indeed, Danielle felt lucky to be in a department where other faculty shared a similar teaching philosophy as herself.

Pivotal to the development of her philosophy of teaching was the realization that the personal in the classroom was also a strategy - one that could be used to relate student learning (i.e. anecdotes), build relationships with her students, solicit student participation, and connect lived experiences with knowledge production. Her own undergraduate experience, for example, highlighted a lack of self-consciousness in terms of what was

being taught, why, or its implications for learning. She put it down to a lack of context. She further emphasized the value of doing research in her own discipline, as it informed her about the need for various teaching styles different to what she had experienced as an undergraduate.

Most influential was her struggle to learn about the history of her discipline while still a PhD student. At the time, “[she] could not understand what was at stake in the debates of the discipline . . . because the discipline’s protocols had never been explicitly taught. As a teacher [then], while still a PhD student, [she] needed to learn what . . . [she herself] was not taught, [and] . . . that involved finding out what students already knew and how they learned it.” Through this struggle, an understanding evolved that “knowledge . . . is inflected differently in its dissemination and uses if it is coming from a space that is foregrounded, identified right up front as personal space, as something that comes from lived experience, rather than a textbook or a disciplinary tradition . . .” Once she realized that “. . . the personal was actually a crucial part in the production of knowledge . . . and the value of knowledge, then [she] started to foreground that as an actual principle of practice in the classroom.”

In large classes, Danielle reflects the personal by using anecdotes. Not only does it help build relationships with her students, but it’s quick and easy to implement, and frequently amusing. “It doesn’t take much classroom time [she says] to find out that there are individuals out there with certain kinds of commitments, pleasures, dislikes, or whatever.” She further encourages participation, believing it “. . . crucial to let people know they are

out there and [that] they can contribute to the classroom.” She also communicates with students via e-mail and encourages them to develop intellectual friendships outside of the classroom.

In response to her approach, student feedback has been very positive. They view Danielle as someone who respects their opinion, is interested in what they have to say, and is at their level of learning and knowledge production. From Danielle’s point of view, the students “ . . . develop a new kind of respect for themselves as intellects, if they are called upon to directly contribute to the production of knowledge in the classroom, [and if they understand that I am] . . . firmly committed to valuing a whole range of knowledges and experiences.”

Asked about collaborative learning, she feels most of her teaching involves “ . . . collaboration, not in any mechanical sense, but as a philosophy of what [she] would like to happen in the classroom. What [she does] as collaborative learning is really the creation of a collaborative atmosphere and a collaborative support system.” Having said that however, the impetus for *planned* collaborative learning really came with her senior level XXX seminar. Likened to *killer chem*, she said “ . . . [it was] the specific demands of the course that got [her] thinking a lot more [about] how to get everybody involved.” Indeed, the difficulty of the subject matter required a departure from lecture where she did the explaining, to an intentionally designed course requiring students to grapple with the subject material and come to class prepared (i.e. done the readings) for intellectual discussion. As a result, she restructured the seminar to so that all participants shared in

the responsibility of making sure everyone got through the course. Asked why she didn't initiate planned collaborative learning sooner, she replied, "you need experience with a whole curriculum, with gauging students' abilities, and with setting-up assignments to make a 'freer' classroom a productive classroom."

To prepare students and introduce them to her approach to teaching, Danielle shares her expectations and teaching philosophy, outlining how the course will be run and telling them "from day one [that she will] . . . occupy these positions (teacher, student, authority and collaborator) and that they'll occupy these different positions too!" Danielle also establishes a safe, supportive, and respectful climate to foster student learning. To assist in this endeavour she offers lots of office hours, communicates with student at their level, and role plays for strategic purposes. She refers also to her detailed course outline. "My course outline is about 14 pages long. My objectives [are] warnings like cigarette labels" In general, her courses are designed to make students work. She recognizes students have other priorities though and allows them the flexibility to negotiate changes given their interests, their workload, and the course.

In approaching her courses differently than other faculty, Danielle is challenged on many fronts by her students. The first one she encountered, particularly with first and second year students, was the expectation from students that the teacher is the authority who will impart knowledge and deliver information through lecture. "The point here [she shares] is not to deny or disclaim authority or expertise, . . . but to use it in ways that solicits student awareness of their own knowledges and expertise." As such, Danielle

demonstrates the value of her approach by finding “. . . some way to make what [she is] . . . saying or what students [are] saying, immediately relevant to as many people in the room as possible.” Therefore, she is always looking for something that will speak to the students as a community (i.e. specific to course or university life in general).

Cynicism on the part of students, especially near graduation, is another issue. Dollars and grades, she says, have become more important than a philosophy of exchange, making it difficult to implement collaborative learning. From her perspective, graduate students are more committed to higher education than undergrads. She puts it down to their maturity level and the value they place on their educational experience. With her grads for example, “. . . just [the] difference of a year or two years with their maturity - makes a difference.” Workload is another challenge, but one her students forgive by the end of the semester, once they realize how much they have learned.

From an institutional perspective, Danielle finds it difficult to find time to devote to the development of pedagogical alternatives. “There is no time set aside and valued just to work on pedagogical innovation. It has to be done on a voluntary basis wherever you can fit it in.” She additionally feels the university pays lip service to teaching, continuing to value research over instruction. Even if you choose teaching as your career path, she says, you still have to publish. In light of her supportive department, Danielle stated, “I think there should be greater consistency across the campus and across university communities in general about the commitment to teaching.”

At the department level, Danielle admits she is fortunate to enjoy a supportive and understanding unit. "I am in a department that is very progressive. There are people here who have very similar philosophies of teaching. So I have my own community that fosters a relative amount of safety." In effect, it buffers the university culture and supports her to take risks. Teaching in her department is as important as research. "They are not regarded as separate practices."

Asked about tenure and promotion, Danielle felt it had little impact on her approach to teaching, even before she had tenured status. She simply did not recognize it as a risk. Danielle admits it may vary from person to person though, depending on their personality, situation, environment, and class size. She thinks the teaching dossier is reward itself, with the Tenure and Promotions committee being the place to show it. She does caution the following: "I would hate it to become a means of getting rid of people . . . I think the people I have heard express that anxiety are more concerned that the teaching dossier is a whole new level of bureaucratization of faculty's work . . ."

From a faculty perspective, Danielle often overestimates what can be achieved in the span of a course. Pointing to teaching and learning, she often negotiates with her students what can reasonably be attained. As mentioned previously, finding time to balance academic workload and university expectations is also a constant struggle.

Other challenges she points to involve the physical environment and the shortness of the semester system. With the former she prefers smaller classrooms without fixed seating,

much like the seminar rooms in the MacKinnon building. For the latter, she prefers year-long courses, believing them to be a better setting to create community and foreground the personal as part of knowledge production.

Asked what could be done to remove obstacles to collaboration, Danielle replied: “I think establishing the relevance of academic work to the public sphere is really important. I think it is harder to make that case for some disciplines in the university setting, and I think that it is one of the places where I need to work actively to convince students of the value of what they are doing.”

Alan

In reflecting upon his teaching, Alan described his career as an experiential journey characterized by discovery and change. His early years (late 60's) followed a “Wiseman approach” characteristic of content driven lectures and individualized assignments.

Teaching to Alan involved the dissemination of information and experience to his students, in other words, “professing his field.”

Through reflection and various developments in his personal life and teaching career, Alan’s philosophy of teaching evolved from a “wiseman approach” to an “experiential model.” The focus of his teaching departed from providing information to engaging students in learning activities, increasing student responsibility for learning, having students “experience things,” and “. . . getting students excited about the search for truth” in an ongoing discovery process. “That’s really what learning is all about.” His concept of

teacher also changed, moving authority to facilitator, challenging himself to stretch his preferred modes of teaching, and his students their preferred modes of learning.

In his 30-year teaching career, Alan identified several incidents which “stopped [him] in his tracks,” influencing both his teaching practice and personal life. The experience of parenting, for example, and the insight gained through his participation in PET (a parenting course), were early influences which stressed “the profound importance of listening.” Like writing, Alan viewed the ability to effectively listen as an important student skill, supportive of problem solving, interpersonal communication, and social interaction.

As a junior faculty member, Alan highlighted the value of working with senior undergraduates and graduate students, in other words, experienced learners. As an introduction to teaching, he thought it was an ideal way to begin his career as it allowed him the opportunity to establish comfort with his teaching and confidence in his professorial role. Having reached a more comfortable stage then, he began voicing ideas for teaching first and second year classes. The college dean, hearing Alan’s ideas, offered him the opportunity and challenge of teaching entering year students.

Committed to the task, Alan applied himself to designing a curriculum, still largely content focussed, but offered in an interesting and creative manner. What Alan overlooked in his limited teaching experience though were the unique learning requirements and the competing social and academic needs of first year students. “. . . I can still clearly

remember going to my first class with the first year students, . . . seeing what seemed to me . . . these 40 terrified faces . . . They kind of stopped me in my tracks and made me more student oriented, or son and daughter oriented, and in a broader sense people oriented.” Reflecting upon his experience, Alan recognized the need to give more thought to process (not to mention his audience) and the principles of effective course design.

A pivotal event in his teaching journey (early 70's) involved the opportunity to team teach with another faculty member. As Alan shared, the chance to work with another colleague committed to fostering in students, an appreciation of the XXX profession, created synergy toward the preparation of an interesting and informative course. Lacking direction and a background in course design however, they struggled with the process until they came up with the idea of having students interview professionals in teams. The implementation of the activity proved successful both in terms of meeting course objectives and being received positively by the students. It further revealed to Alan the benefits of active learning, leading him to wonder: “why don't we do more of this kind of thing? To do it, the learner becomes more engaged and responsible for learning?” Excited by his success and inspired by his insight, Alan continued to experiment with various teaching practices, implementing more active learning and taking a less central role in the teaching and learning process.

Through this trial and error procedure, Alan was introduced to collaborative learning. As he shared, “it wasn't as if I went to something and somebody laid out all these neat things in terms of collaborative learning that came later in terms of beginning to have some

discussions with people that began to call it that.” For Alan, “it was really [his] own learning [and] exploring [which] moved [him] along in [his] teaching.” By experiencing things and attempting to make sense of them, for example, he broadened his understanding, moving onto the next experience in what he described as an ongoing, cyclical process.

The net result of his learning led to further reflection and change in teaching. For example, Alan began to move away from content-based lectures and started to implement team projects, where lecture became a tool to set the learning context and launch student groups. Assignments also began to vary with a growing balance of individual and group initiatives. Finally, Alan increasingly offered encouragement to students, making himself available for consultation and advocating the use of resources and peer support. His actions suggest a recognition that students, like faculty, need support when assuming risk and trying something new. As Alan shared, “my sense . . . is that we have students who are coming-in, accustomed to higher grades, [succeeding] . . . out of a model that has been very individual.”

To prepare students for his approach to teaching (early 80's), Alan talks to them about learning, providing opportunities to reflect upon their own conceptualization. He additionally incorporates Kolb's Learning model to promote discussion about different learning styles and highlight various teaching practices found in higher education. Beyond that, Alan is upfront about his use of team projects and problem solving, acknowledging to students the inherent risk of group conflict, while assuring them that part of the course is

devoted to developing conflict resolution strategies. Finally, he acknowledges that collaborative learning may not be for everyone, but shares: “whatever people take away from it . . . , virtually everyone comes out of the experiential exercise in a different place [or] level.”

Asked about collaborative learning, he described it as a process where “. . . the student has to be encouraged to take more responsibility for their own learning . . . ” and use the best resources around them. In terms of how, Allan replied: “you have to set-up some example or model in the class to get them to use the resources around them.”

Acknowledging student discomfort with problem solving and collaborative learning, Alan appreciates faculty discomfort with its use. From his own experience Alan understands the apprehension that comes with giving-up total control (in terms of authority). Getting to a point where faculty feel comfortable and confident enough to assume risk doesn't just happen he says. “Trying out a number of these things takes time for me to feel comfortable with, and for me to help the students feel comfortable with, because they may not [have] experienced these [things] either.” He further notes, “it's going to take . . . a bit of a learning curve to get things working . . . [and] it's likely to be at a point in my career where I feel sufficiently confident about where I am [with] my position . . . [Only] then [am I] open to thinking I would like to try some other things.”

As such, Alan reiterates the need for a safe and supportive environment, questioning the university's ability to support and encourage innovation, when the current practice of

tenure and promotion values research over teaching, when student evaluations have the potential to impact tenure, when computerized course evaluations fail to encourage written student comments, and when “. . . individual faculty deal [poorly] with student evaluations.” From Alan’s perspective, there is limited understanding for the risk instructors assume when departing from the traditional teaching paradigm. He shares, “. . . the pockets in a university campus where faculty really feel supported to take risk is really the exception rather than the rule. I’m sorry it’s that way. It’s not what I anticipated.” Indeed, Alan’s own need for support led him to help others through his work with Teaching Support Services. As he discovered, “. . . many, if not most, faculty . . . really [struggle] with . . . their lack of confidence . . . to take risks.”

Referring to the research culture, Alan shares, “many teachers who try something new, if it bombs, never use it again . . . For whatever reason, in teaching methods that seems to be the way people react. We’d never react that way in our research! You go into a lab and try something for the first time - you’d be surprised if it worked! In fact, you would try it a few more times. You reserve judgement. Around teaching, for whatever host of reasons, we don’t suspend judgement, and we pay a lot of attention to the negative.”

In response, Alan calls for peer consultation, wanting faculty to support one another in reflecting upon their teaching objectively and reviewing student evaluations impartially. He further calls for a mechanism whereby faculty can network with one another. Finally, he reiterates a need for understanding by tenure and promotion committees that evaluations may initially go down when implementing teaching innovation. As Alan

discovered, even with support, faculty find innovation scary. Referring to his own department, he shared the experience of one faculty member, who upon trying something innovative unsuccessfully, would not make another attempt, even with the encouragement and support of Alan.

Asked about other barriers, Alan points to the operational issue of assessment and the challenge posed by the physical environment. In regards to the evaluation of students, Alan thinks the university has made it difficult to promote innovation like collaborative learning, when “we have students who are coming-in, accustomed to higher grades [and who have succeeded] . . . , much as faculty themselves, out of a model that has been very individual.” Indeed, students entering university are acculturated to a competitive environment where success is measured by grades, not learning. As a result, Alan uses different forms of student evaluation and “ . . . helps them (his students) feel comfortable with that process so they do not feel threatened.”

In reference to the physical environment, Alan thinks most classrooms at the University of Guelph are inadequate, lacking flexibility to move things around or adapt the setting to suit his teaching style. Flexibility is important to him, as he believes the set-up of a classroom conveys something about student expectations and the overall learning climate.

Asked what the university could do, he points to greater faculty support and more network opportunities encouraging teaching innovation and faculty risk. While he admits there is a greater use of language in support of innovation and that the climate is

improving, "it still has a long way to go . . . before people really feel they can take risks."

CHAPTER 5 - Findings

Introduction

As mentioned previously, the stories provided a context to frame and decipher the interconnectedness between issues and challenges identified by faculty. They further highlighted the importance of journey and reflection as professors develop as university teachers. In this chapter therefore, their stories are woven together, illuminating the significance of events during their teaching journey and outlining the pattern of connections between issues and challenges associated with implementing collaborative learning in undergraduate classrooms at the University of Guelph.

Current Philosophy of Teaching

Asked about their current philosophy of teaching many used similar, if not the same, language to express their teaching goals and describe their perceived role(s) as educators. *Engage, motivate, transform, discover, stimulate, and experience* were examples of action words used to characterize the teaching and learning process - a process for which they increasingly emphasized learner self-reliance and student responsibility as the pillars of learning. In terms of their teaching position, they came to recognize the value of distancing themselves as the central figure in the teaching and learning process, “stepping out of the spotlight” into a more facilitative role. Accordingly, the act of teaching focussed less on the provision of information and facts - the “wiseman model” as Alan framed it - and more on facilitation where the instructor assumes a variety of positions, including: resource person, mentor, co-contributor to the learning process, and provider of

conceptual models in which to frame student learning. Danielle simply refers to these roles as “. . . teacher, learner, authority, and collaborator.”

Just as their teaching roles evolved, so to did their instructional goals. Faculty expectations of students focussed more on helping them learn how to learn, develop and employ higher order cognitive skills such as analysis and synthesis, connect lived experience with conceptual understanding, and construct knowledge in meaningful ways such that students “grapple” or “get dirty” with the subject material. As a result, their classes and teaching became more interactive and collaborative, and their teaching methods and assignments more varied. Lecture became one of many teaching styles employed, instead of the only means of communication between faculty and students. Faculty also used lecture more strategically to cover major points and key concepts (i.e. a mini lecture), and to provide a context to launch other teaching methods such as students teams. They also approached lecture from a more engaged and relational perspective. For example, Danielle, in response to having large class sizes, used anecdotes during lecture to help build relations with her students, inject humour into the classroom, connect personal experience as learning anchors with the subject material, and solicit participation from her students. Sawyer interspersed lecture with buzz groups, encouraging participation and student feedback, while Alan and Neluka used lecture at the beginning of class before moving into other methods as the main form of teaching and learning. As Sam shared, “it’s been a shift from lecturing totally in the beginning to mixing lecturing, town hall meetings, outside speakers, videos, and that kind of stuff.” That other “kind of stuff” includes a host of other teaching approaches that embody the principles of

collaborative learning, but are identified by other descriptors according to faculty preference or teaching discipline. They include: experiential learning, role playing, team learning, case-based learning, and problem solving. Jean MacGregor (1990) refers to the latter teaching methods as “clusters of collaborative learning vines.”

In terms of assignments, both group and individual projects were assigned. These assignments were more topical and strategically designed with student learning, practical application, as well as feedback and support in mind. They were also more reflective of course goals and faculty teaching philosophies. In their creation, for example, many instructors drew from a variety of sources and took various approaches to encourage active learning, knowledge construction, and student understanding. Sam, for example, looked specifically to his discipline to design assignments that replicated practice in the field, applied student learning, provided opportunities to develop transferrable skills, while giving back to the community. Examples of his assignments include: town hall meetings, outbreak investigations, and public awareness initiatives. By contrast, Danielle drew from issues and events happening in the University community, connecting meaning with course content, while fostering knowledge development. Neluka incorporated up-to-date examples of case studies for her students, obtained through interactions with industry and professionals in her field. Yet another faculty member, Sawyer, took a “mastery approach” to assignments (class size and resources permitting), handing them back to students with written comments, and a request for resubmission if a minimum grade of 70% or more was not achieved.

Together their educational roles, instructional goals, and approach to teaching and learning exemplify their current philosophy of teaching and its operation in the classroom.

How have their teaching philosophies changed?

The teaching philosophies and instructional goals these faculty presently value and the assignments they now employ, represent a significant departure from when they first started teaching. Their positions today reflect a history of experience, practice, and commitment to teaching, developed through a process of reflection and change. Now of course, they espouse constructivism rather than traditionalism and practice collaborative learning or one of its many “vines” over content-based lectures.

Looking back to when they first started teaching at the University of Guelph, many lacked instructional experience or a background in education or pedagogy, having just completed their graduate program. Those who did report teaching experience, referred mainly to teaching assistant jobs or lab instructor experience that, more often than not, was traditional in approach. Some faculty even reported having to learn the subject material, as they taught it for the first time to their students. As Sam shared, “a lot of what I did was lecture on the subject matter to the students, because this is what I was struggling with [myself].” Only Danielle, who started teaching during her PhD program, was more practised and experienced at teaching giving her a headstart, so to speak, with her approach to teaching. Even so, she faced many struggles of her own as she learned about the history of her discipline and came to understand “. . . that knowledge is inflected differently in its dissemination and uses if it comes from lived experience rather than a

textbook or disciplinary tradition.” Her colleagues, lacking insight and experience, drew from their own experience as students and/or emulated the examples set by their peers to guide their teaching approach. With the exception of Danielle then, content-based lecture became the preferred mode of instruction and “information provider” their main role as educators.

In a sense, lecture became a crutch in their attempt to establish control over their teaching, gain confidence in their instructional role and status, and become comfortable with the subject material. Leslie, for example, described her early teaching experience as operating in “survival mode”. She looked for the simplest way to teach - lecture - where she talked and the students took notes and wrote exams. Another professor, Neluka, “cringed” at the mere thought of her entry into teaching, sharing: “...it was so scary when [I] think what I did to those poor students. I was straight out of a [XXX program]. I had never had any exposure to pedagogical issues, and I really didn’t know what I was doing. I had a huge class . . . and I did lectures . . . [with] overheads, absolutely loaded with facts . . . ” Yet another instructor, Paul, felt insecure at the onset of his professional teaching career, feeling challenged at teaching graduate students older than himself, and expressing a need to “ . . . really show them [his] stuff.” Bowing to his insecurities then, he reverted to the “ . . . same mode of telling . . . ” Whatever their reasons, all seven turned to lecture for either the structure and control it offered in terms of course content, classroom management, and/or instructional practice.

Because teaching was such a new experience for these faculty, survival, not innovation

was their key concern. Being able to look beyond teaching and critically examine their instructional practice, came after they gained experience and confidence teaching, comfort with their subject matter, and for some like Danielle, greater understanding about their specific discipline. Once a certain level of competence in these areas was achieved, they began to look outwards continuing to develop their current philosophy of teaching and instigating more active and collaborative (constructivist) approaches.

For some, this journey was accelerated or extended by the various opportunities they encountered, their individual motivations and personality, and the teaching culture in which they started. Alan and Sawyer, for example, did not benefit from a supportive teaching climate. Beginning their careers almost 30 years ago, programs such as New Faculty Orientation were not yet available. As Alan shared, he was shown to his office and left to his own devices. As such, both Alan and Sawyer taught in isolation, becoming innovative at a much later point in their careers. To their credit though, both became supporters of innovation, facilitating mechanisms of support which Paul and other faculty later benefited. Now of course, the University of Guelph is more supportive of quality teaching and effective student learning, as evidenced by the induction of Teaching Support Services (formerly Office of Educational Practice) and a “Strategic Planning Document”, valuing above all else, collaboration and learning-centredness (SPC, 1995). Faculty teaching for the past ten to twelve years then have had the benefit of starting their careers in a more supportive climate, with greater opportunity to develop as a teacher.

The Journey

Over the course of each faculty member's teaching career, a number of incidents both internally and externally motivated shaped their teaching journey and professional development as university instructors. While some experiences were shared between faculty, their significance was personal and their journey - by enlarge - unique. On the other hand, patterns of events did emerge which warranted classification. As a result, the various incidents were categorized in one of three typologies.

As outlined in Table 3.2, the significance of faculty events were identified as either *facilitative*, *illuminative*, or *major*. Briefly, major events and illuminative incidents, whether internally or externally motivated, led to reflection and change in teaching. Major events however, had the cumulative impact of many minor incidents put together. By contrast, facilitative incidents provided the means (i.e. skill development) or climate (i.e. faculty support) to be innovative, but lacked the reflective quality characteristic of change that the other two exemplified.

Major Events

Major events were experienced by three of the seven faculty I interviewed - Sam, Neluka, and Sawyer. The impact of each was significant and felt immediately. Combined with other illuminative and facilitative events, it also initiated and accelerated the development of their teaching and movement toward innovation such as collaborative learning. Each incident was similar in that Sam, Neluka and Sawyer were invited to take part in a collaborative effort to plan and implement a course or program. While other faculty I

spoke with similarly co-taught courses, their impact was less pronounced. Sam, for example, was involved in a pilot project to design and implement a course with faculty from across Canada; Neluka was part of a team responsible for planning and implementing an educational program for professionals in her field; while Sawyer was involved in coordinating and implementing an international extension project with faculty from across campus. The net result of their involvement produced similar outcomes. They include:

- insight to student learning (i.e. students learn better when they grapple with content),
- opportunity to observe other faculty teaching,
- a chance to experiment with and practice different teaching approaches,
- a means to gauge student reaction to various teaching styles,
- an understanding of the importance of orienting learners to various instructional practice,
- opportunity to practice and improve course design (including assignments and assessment),
- a chance to network with other faculty, and
- an introduction to pedagogical issues and challenges.

For Sawyer, his experience additionally introduced him to pedagogical literature and legitimized teaching as a scholarly act - an important consideration given that he started his career with an emphasis on research. In general however, each benefited from their experience, accelerating the development of their teaching philosophy and instructional practice.

Illuminative Events

Illuminative events, which also spark reflection and change in teaching, were most common and happened to all seven faculty. A sampling of these incidents are detailed below.

For Paul and Sawyer, looking for evidence of student learning (i.e. borrowing lecture notes, asking questions) was an early initiative in their teaching career. Their actions, for example, led them to discover how little their students actually learned in a traditional lecture format. It further emphasized the need for students to “. . . experience it (learning) in other ways” and through other modes of teaching. In both cases, their realization led to graduated change as they experimented over the years with different instructional approaches. During this time, Paul came to understand that students learn better and are more excited when he doesn't have all the answers. He also determined what students would and would not accept, discovering in the process a need for balance between latitude and direction in teaching and learning. For Sawyer, this time was equally enlightening. He gradually became aware that learning goes on, not so much in lecture, but when students “grapple” with the subject material either in labs, when problem solving on their own, or when participating in buzz groups.

Team teaching held significance for Alan and Sam in terms of their instructional practice and insight into teaching. For Alan, the experience of co-teaching a course he had previously taught before, proved to be both energizing and facilitative in brainstorming innovative ways to introduce students to the XXX profession. The process was

strugglesome, but one that produced a learning activity that had students interview professionals and report their findings to the rest of the class. While the assignment took careful planning, the activity was well received by students and revealed to Alan the benefits of active learning. It further led him to question, why more faculty don't practice its use more readily on campus. Regardless, the insight Alan gained inspired him to decentralize his role in the classroom and experiment with other teaching approaches over a period of many years.

Sam's experience of team teaching led to similar gains. As both he and his colleague were committed to supporting student learning, fostering learner understanding about their discipline, and providing students with the opportunity to articulate their learning in a public setting, both looked critically at their discipline for ideas. Noting a trend which addressed and discussed problems in the public domain, they decided to structure assignments to model this practice. While some students expressed preference for lecture and traditional assignments, overall, the project was well received, encouraging Sam to look for other ways to structure his teaching and assignments in an applied manner.

While team teaching inspired change in Sam's instructional practice, it was the departure of his colleague, the loss of her department's support, and the threat of the course being cancelled which inspired Sam to risk innovation and become more experimental. Feeling he had nothing to lose, Sam drew from his collaborative teaching experience (mentioned above) and the ideas developed with his former partner, to restructure the course so that a major part of the students' learning centred around the implementation of a town hall

meeting. As this was practice in Sam's discipline and provided opportunity for students to learn valuable skills while engaged in learning, he split the students into groups (i.e. government, consumer, farmer, industry) and asked them to take the best science they knew and argue their position. The overall experience was very positive. It affirmed the risk Sam assumed in trying something new and it tied in with his emerging teaching philosophy valuing active student learning and knowledge development, expressed in a public forum.

For other faculty, the experience of teaching a specific course, managing a set of courses, or working with a particular group of students similarly led to reflection and change in teaching. For Leslie, finding a way to manage her course load and lessen the amount of time spent preparing detailed lectures, encouraged her to look at ways to involve students in the teaching and learning process. In experimenting with different options she realized students, "... when they start taking on work, take on responsibility for it . . . , encouraging confidence on their part and [overall] hard work . . ." This insight proved invaluable as she realized some courses required alternative approaches to lecture and traditional assessment techniques, in order to achieve greater student responsibility. By means of example, Leslie shared her early experience teaching XXX, where she was challenged by the discovery that "she wasn't getting the best out of them (the students)." They were treating her course like so many others, where the bulk of work and/or study is left to just before the exam. As a result, Leslie restructured the course to promote measured workload, continued and involved learning of the subject material, and ongoing feedback between the students and herself.

For Alan, the opportunity to teach first year students likewise contributed to reflection and change in his teaching. Afforded the opportunity to teaching entering year students by his dean, Alan applied himself to designing a course, still lecture-based and content oriented, but offered in an interesting and creative manner. What Alan overlooked in the process of design, however, were the unique learning requirements and competing academic and social needs of first year students. As he related, “. . . I can still clearly remember going to my first class with the first year students, . . . seeing what seemed to me . . . these 40 terrified faces . . . They kind of stopped me in my tracks and made me more student oriented, or son and daughter oriented, and in a broader sense people oriented.”

Reflecting upon his experience, Alan recognized a need to give more thought to process (not to mention his audience) and principles of effective course design.

With Sam, content coverage proved challenging at an early point in his career. Realizing that “there was no one way to get across all the material” in the space of a semester, Sam looked to his discipline and examined it more critically. In the process, he began to ask questions, such as: “How do we think about [xxx]?” and “What are the ways we organize how we think about this type of information?” Reflecting upon these questions, he discovered theories and frameworks with which to explain key concepts to his students. While Sam continued to lecture in his classes, he started to provide more examples and experiment with different assignments that were more applied and involved students in their learning.

Danielle similarly examined and researched her discipline as she struggled to learn about

its history. At the time, “[she] could not understand what was at stake in the debates of the discipline . . . because the discipline’s protocols had never been explicitly taught. As a teacher [then], while still a PhD student, [she] needed to learn to teach what [she] was not taught . . . That involved finding out what students already knew and how they learned it.” Through this struggle, an understanding evolved that “knowledge . . . is inflected differently in its dissemination and uses if it . . . [comes] from a space that is foregrounded, identified right up front as personal space - something that comes from lived experience, rather than a textbook or a disciplinary tradition . . . ” Once she realized that “. . . the personal was actually a crucial part in the production of knowledge . . . and the value of knowledge, then [she] started to foreground that as an actual principle of practice in the classroom.” As such, the personal became a strategy in her classroom - one she used to relate student learning (i.e. anecdotes), build relationships with her students, solicit student participation, and connect lived experiences with knowledge production.

Research also informed Sam’s teaching practice. Having to interview key participants to obtain their knowledge and insight about his research topic, he began to understand that knowledge is created through a social process of construction. This insight led to the realization that “we are shifting away from . . . these authorities” and contributed to his emerging philosophy that students, “. . . if they know how to ask the question, the details they can look up in books. The ability to pull together and argue, you can’t get that out of books, you have to do it.” As a result, Sam began to apply his philosophy in the classroom, launching more collaborative activities.

For Danielle, it was really the specific demands of her XXX seminar which led to planned collaborative learning. While she believed an element of collaboration already existed in her classes with a collaborative atmosphere and support system, it was her XXX seminar (likened to killer chem) which called for reflection and change. Having taught the seminar a few times previously, she realized that the subject matter required a departure from lecture where she did most of the explaining, to an intentionally designed experience where students grapple with the subject material and support one another in their learning. Asked why she didn't initiate planned collaborative learning sooner, she replied, "you need experience with a whole curriculum, with gaging students' abilities, and with setting-up assignments to make a 'freer' classroom a productive classroom."

The impetus for collaborative learning or team learning as Leslie prefers it, came about through her own desire to promote human relation skills, foster student interdependence, and encourage learner responsibility. It also responds to the individual culture perpetuated by higher education and her belief that team work really makes a difference in student learning. "At university, [for example] we are great at the individual. We compare them (students) to each other, yet that doesn't prepare them for the world of work where there is growing emphasis on work place teams and shared credit."

With Paul, the opportunity to attend a college conference and speak with other faculty about educational theory and instructional practice, assisted him in the development of his teaching in two ways. One, he started making connections between theory and practice where previously he had only been interested in technique. And two, he realized that he

had a name to identify his current approach to teaching - collaborative learning. Previous to the conference for example, he had not been “. . . aware of it as being called anything . . .” His discovery was profound, affirming where he fit in and what he had been doing. It also instilled a desire to reach out to the available literature.

As the scenarios above suggest, each incident engendered a reflective quality which led to change and development in their teaching.

Facilitative Events

Facilitative events also played an instrumental role, whether felt immediately or realized as significant upon later reflection. By enlarge, support was the main factor identified by faculty as being instrumental to their development. Leslie, in particular, appreciated the resources (i.e. teaching assistants) her department provided in order to support the teaching she implemented. She also valued the emphasis her department placed on instruction through their annual teaching awards, their practice of recognizing innovative teaching during promotions and tenure review, and a departmental teaching philosophy valuing group learning. In Leslie’s own words, “if I have struggled and I have asked for help, I have always gotten it.”

Neluka similarly appreciated the departmental support she received early in her career, with the assignment of a mentor and the receipt of case method training. She further highlighted departmental teaching awards, a hiring policy looking for evidence of good teaching, and a shared instructional philosophy as facilitative of her own innovative

practice. Danielle likewise expressed appreciation of her safe and supportive environment. Completing both an undergraduate and graduate program in the same department at the University of Guelph, she established a basis to begin her career, when she returned as a sessional instructor. Knowing that what she did and what she said would be valued by her colleagues, contributed to this feeling. Working in what she termed a “progressive” department - one where people shared similar teaching philosophies - was also instrumental. Other faculty like Sawyer, appreciated an established network of colleagues whom he could turn to for information and support, while Paul valued the mentor he found in his former PhD supervisor.

Beyond a safe and supportive environment, Sawyer and Alan found the experience of teaching senior and graduate students at the onset of their careers - a low risk introduction to teaching. Both claimed it afforded them an opportunity to gain comfort and confidence teaching, and provided a basis to look beyond the mere “delivery” of content in their classes.

A positive rather than a negative reception to innovative practice was cited by a host of faculty as a facilitative event. Danielle’s students tell her, for example, that they appreciate the sincere interest she shows in their learning and the ability she has to relate to them at their level. Danielle puts it down to her sense of “personal” which, she believes, comes from growing up in a rural setting, a desire to interact with people, and a drive to break down official barriers when establishing community. Sawyer, points to having taught upper year students in the same stream of study. According to him, by the

time they reach his courses, they seemed to have “. . . got the message and moved on.” This, he felt, facilitated his transition from the traditional lecture to more participative practices. Likewise, Sam and Alan appreciated positive student feedback, affirming the risk they assumed in trying something new.

Aside from those already mentioned, Neluka additionally highlights her role as a reviewer for an educational journal in her field and the continued involvement she has with the professional education program she facilitates. Together they keep her apprised of issues in the field and avail to her a wealth of case scenarios to use within her classes. As Neluka so candidly pointed out, “you have to be absolutely up-to-date and comfortable with your theory . . . It’s not canned stuff!”

As the experiences of the faculty suggest, facilitative events played an important role in their teaching philosophy and their development as instructors, providing the necessary skills to teach, the climate to be innovative, and a buffer against risk.

The transition to collaborative learning

As the above mentioned incidents suggest, each faculty member experienced a host of factors which influenced their teaching journey and guided their movement from traditional teaching approaches to more constructive methods such as collaborative learning. As evidence by some faculty already, one particular incident seemed to act as a turning point toward their recognition and use of collaborative learning. For Danielle it was the “specific demands of the course” which forced her to reevaluate how to approach

students were treating her course like others', where the bulk of study or work is left to just before the exam, motivated her to revisit her approach more collaboratively. Paul's insight came with attending a college conference on teaching and learning, where in talking with other faculty, it became clear to him that the practices he employed, to a large degree, were already collaborative. It was the naming of his approach which was significant. For Alan, "it was really [his] own learning [and] exploring [which] moved [him] along in [his] teaching." Collaborative learning became standard as a practice in his classroom, when he began to have discussions with people who actually called it that.

Neluka's introduction and use of collaborative learning came early in her career with the involvement she had in planning and implementation an education program for professionals in her field. This major event was a turning point in her development with the skills and experience she received in course design, instructional practice, and knowledge development to name a few. Likewise, Sawyers's involvement in preparing for an international extension project on teaching and extension methods, exposed him to the pedagogical literature and new teaching practices such as group learning and the discussion method. As Sawyer related, "getting ready for that workshop opened my eyes to the fact that there was a body of knowledge about this. The fact that it wasn't just hearsay and happened [by] chance . . . , but that there were actual books and literature about this" Sam also benefited from his collaborative involvement in planning a course with faculty from across Canada. Like Neluka and Sawyer, it opened Sam's eyes to a host of teaching issues and provided opportunities to practice and experiment with various teaching styles.

What does collaborative learning mean to faculty?

Mentioned previously in this chapter, each faculty member experienced a series of events which facilitated their development as teachers and led to reflection and change in their teaching philosophy, instructional practice, teaching goals, and classroom assignments. During this process, their understanding of collaborative learning also evolved. Interestingly, their conceptions of collaborative learning, whether named as such or not, (i.e. case based learning, experiential learning) mirrored their current teaching philosophy and instructional goals. As a result, phrases such as the following were increasingly common in their descriptions: *learning together, helping the class learn from one another, encouraging students to take greater responsibility for their learning, team work, active learning, knowledge development, discovery, learning through discussion, experiential learning, conceptual learning, and case-based learning*. Compared with the definition provided in chapter one, their descriptions reflect the active, social and constructive qualities that collaborative learning, or one of its namesakes, maintain.

Issues and challenges associated with the implementing collaborative learning

Once faculty reach a point of readiness to begin using collaborative learning, they are faced with a number of issues and challenges associated with its implementation. In the following sections, those challenges are described according to one of five categories: students, faculty, operational concerns, the physical environment, and institutional/cultural factors.

Student Issues and Challenges

Collaborative learning requires students to operate from a different space than in more traditional learner settings. In essence it requires “reframing the student role” (MacGregor, 1990). Under the prevailing “wiseman” model, the teacher as expert transmits his or her knowledge through lecture to the passive student, who like a receptacle, is filled with knowledge and the expectation that individually they will make meaning and demonstrate their understanding through traditional evaluative methods. Under “experiential” or “collaborative” models, learning is an active process where meaning is constructed as a community. Students, with the guidance and resources of their peers and teacher create meaning through a social inquiry process, drawing from personal experience to contextualize learning and construct knowledge. In this setting knowledge is property of the community, not the faculty member whose role in student learning from this approach, is more facilitative than directive. As Thomas Kuhn (as cited in Bruffee, 1995: 14-15) noted, knowledge is “intrinsically the common property of a group or else nothing at all.” Viewed on a continuum then, these two approaches are on opposite ends. They engender different expectations of professor and learner, and they require a shift in how each party experiences their role in the teaching and learning process.

As students “reframe” their part in learning under innovative approaches such as collaborative learning, it is not uncommon for faculty to encounter learner resistance or uncertainty (MacGregor, 1990). The professors I spoke with observed students grappling with a variety of issues and challenges as they experienced collaborative learning for the

first time. Many faculty commented on students, particularly those in their first and second year, expectant of more didactic forms of teaching where the professor and course textbook form the basis of instruction and knowledge. Faced instead with faculty expectations of greater student responsibility and active learning, many students displayed anger and disbelief. Leslie, for instance, experienced a “you owe me” attitude from her students, an attitude she attributed in part to student expectations of traditional learning settings, but also to their maturity and perceived value associated with the rising costs of education. As a result, efforts to validate her approach became necessary. Danielle also felt the sting of her students’ anger. As such, she learned very quickly that “the point . . . is not to deny or disclaim authority or expertise, . . . but to use it in ways that solicits student awareness of their own knowledges and expertise.” Therefore, she always looks for ways “. . . to make what [she is] . . . saying or what students [are] saying, immediately relevant to as many people in the room as possible.” Paul additionally experienced learner resistance. In one course for example, a student stood up in his class and shouted, “who the hell do you think you are!?” Other students, he shared, complained at thinking for themselves saying “that’s your job. You should read those books and . . . tell [us] what information [we] need to know.” Like Danielle and Leslie, Paul had to assess his approach and demonstrate the value of his teaching. Another faculty member, Sam, wondered if their negative reaction wasn’t the result of students having “. . . particular ideas of what they’re going to get out of . . . class, [bringing expectations set by] . . . whatever everyone else has been teaching” - in others words, the individual and competitive learning experienced during high school or perpetuated by traditional university teaching.

Aside from understanding the concept of collaborative learning, faculty observed students struggling with its newness in terms of student roles. Leslie, for example, had students who were inexperienced with group work and unprepared for the amount of work expected. As a result, they were often “pissed” with her. Fortunately, with time and proper orientation to group learning, she found most students adjusted to their new roles of active problem solver, contributor, and discussant. Most likely the demands of higher order thinking and a more public domain in the classroom added an element of risk for students (MacGregor,1990). A supportive learning environment with opportunities to develop new skills and become comfortable with these and other more traditional roles such as listener, note taker, and observer is therefore needed. For students who are used to more traditional styles of learning, greater effort on their part will be required. For seasoned learners with former group work experience at the higher education level, the transition to collaborative learning is likely more fluid and less risky. As Sawyer found with upper year (2nd to 4th year) and graduate students in the same stream of study, in terms of skills needed to be successful, they seemed to have “. . . got the message and moved on.”

Learning to work with peers rather than alone and in competition is an additional challenge for students. Alan specifically highlighted first year learners who enter university, “. . . accustomed to higher grades [and] . . . a model that has been very individual.” Indeed, coming from an educational system where competition and individual merit is the norm and then entering higher education, where in the midst of collaborative learning the dominant paradigm is more independent rather than interdependent, a mixed

message about the status quo is set and the message for collaboration is muddled. As Sam summarized, “everybody else is doing this, this, and this, and you’re doing something completely different . . . They’re (students) so busy, they do not have time to second guess what this professor wants versus what all . . . other professors want. They get annoyed with innovation.”

Some professors additionally questioned student commitment and motivation for learning. Danielle and Neluka, in particular, highlighted student passivity and poor preparation in advance of class. In fact, Neluka often “. . . wonders if they lack the maturity to understand how this approach can be a powerful learning opportunity [or if they] . . . only pay attention when [she is] lecturing?!” Contrasted with her graduate students, Neluka and many other professors I spoke with, noted what a difference a year or two makes in student motivation, willingness to learn, and level of experience to understand and anchor learning. Leslie also highlighted the practice of students in “. . . treating her course like . . . others, where the bulk of work and/or study is left to just before the exam.” Meanwhile, Neluka, Danielle, and Alan questioned the level of priority students place on learning, wondering if their competing needs and priorities associated with the “university experience” rank higher than that of academia. Neluka in particular questions “. . . if the course doesn’t provide the framework for them (the students) to situate their social life,” leaving her to wonder if she isn’t doing a disservice to her students by remaining true to her philosophy. As such, she sometimes ponders if she should return to the practice of lecturing, with two midterms and a final. In the end, she puts it down to personal accountability, sighting: “there is something about individual personal accountability that is

a highly motivating factor, but if absent, when push comes to shove students have other priorities.”

Learning preference was another student challenge commonly observed by faculty. Students, used to a model (coming from high school) which supports competition, a private presence in the classroom, and a passive or surface approach to learning view collaborative learning as both challenging and risky. As such, many faculty encountered student resistance, requiring creative practice to strengthen learning modes in other domains. Paul and Alan, for example, implement learning styles exercises to promote discussion about the diversity of learning and teaching styles practised in higher education. Alan, in particular, honours this tradition, believing that “whatever people take away from it . . . , virtually everyone comes out of the experiential exercise in a different place [or] level than where they went into it.” By contrast, Danielle maximizes the personal in her class, respecting students for how they learn, but challenging them to move beyond their comfort zone. Other faculty, including those already mentioned, employ a variety of teaching methods which cater to different learning styles and further provide some means of orientation to prepare students for learning. Fortunately, most learners make the transition to collaborative learning. As Paul discovered, the majority of students with time, practice, and support “ . . . very quickly get over that [resistance] and enjoy the freedom.” His positive course evaluations would suggest this to be the case.

As student concerns add to those experienced by faculty, many now implement some means of orientation or training in their classroom. At a minimum, the faculty I spoke

with, take time during the first class meetings to talk about their teaching philosophy and to outline their instructional approach. Most of them additionally highlight their course expectations, review the course syllabus, and address student anxieties about collaborative learning. Some faculty, like Alan and Paul, also implement learning styles exercises to open discussion about the various ways students learn. Sawyer, himself, introduces various learning activities (i.e. nominal group technique) to prepare students for the discussion method. Meanwhile, Danielle and Leslie value the creation of a safe and supportive environment which respects students and fosters their learning. Leslie additionally refers students to her out-of-class group training session to help them make the transition from passive to active group learners.

Faculty Issues and Concerns

Faculty engaged in collaborative learning similarly expressed a need to reshape their teaching role(s), having their own “learning curve” to undergo. As their stories suggest, innovative teaching evolved as they reached a point in their careers where they felt comfortable with the subject material, experienced at teaching, and confident in their abilities to undertake the “experiential” or “collaborative” mode. Beginning their careers without the benefit of formal teaching experience, a background in education or pedagogy, or orientation to their position (if even available) however, many were disadvantaged from the start. Alan captures the experience of several faculty, reflecting on his own teaching history. “It wasn’t as if I went to something and somebody laid out all these neat things in terms of collaborative learning that came later in terms of beginning to have some discussions with people that began to call it that. It was really my own learning [and]

exploring [which] moved me along in my teaching.”

Reaching a point where faculty feel disposed to move beyond transmitting knowledge, to distancing themselves from authoritative teaching structures and embracing collaborative learning (or other innovative practices), is and of itself, a major hurdle. As Alan expressed, “trying out a number of these things (innovation) takes time for me to feel comfortable with, and for me to help the students feel comfortable with, because they may not [have] experienced these [things] either . . . It’s going to take . . . a bit of a learning curve to get things working . . . [and] it’s likely to be at a point in my career where I feel sufficiently confident about where I am [with] my position (colleagues) . . . [Only] then [am I] open to thinking I would like to try some other things.” Sawyer similarly expressed concern when he highlighted the fact that discussion learning (as he prefers to term it) is “scarier” for beginning teachers. It feels as “ . . . if you’re losing control [and that] the game is wide open. You don’t know what this group of three bright students together might concoct . . . or [what] question they might ask . . . In a lecture setting you have got control. You’re delivering, and you know . . . [that] there won’t be any surprises . . . It wasn’t until . . . I was getting more comfortable with my status and [the] material, that I was willing to take those risks . . . ”

As Alan’s and Sawyer’s experiences suggest, inherent in trying something new, like collaborative learning, is the element of risk. On some level, each faculty member I spoke with expressed this sentiment in terms of the institution or culture, their peers, their students, themselves, or a combination of them all, making their teaching journey that

more challenging. As Richard Felder's (1995) titled article on group work suggests, we never said it would be easy.

On an institutional level, an individual rather than a collegial culture continues to perpetuate more authoritative, didactic forms of teaching, offering little to engender a spirit of collaboration among faculty and administration or a model of community for students. Instead, many faculty teach in isolation without the benefit of instructional support. While the "conversation of teaching" is on the rise, lack of self-confidence or support from one's peers, department, or university make it difficult to break with the dominant paradigm of lecture in favour of alternative forms of instruction. As Neluka and Leslie expressed, faculty are "independent creatures" who are "great at the individual." Fortunately, higher education is responding to calls for quality education, forcing many institutions to openly address the issue of teaching and to foster what Barr and Tagg's (1995) titled article suggests - a paradigm shift from teaching to learning.

Expectations and perceptions of teaching by one's colleagues pose additional concern for faculty. Sam, for example, remembered feelings of reservation while a junior faculty member, admitting he was more traditional in his research and teaching at that time, and that he "... wouldn't have tried as much before tenure" if he thought his peers might believe his practices "weird". Now of course, he's "... become more experimental [taking] more risks as [he's] gotten along in terms of [his] university career." Alan similarly expressed concern on this matter, noting his decision to experiment with other teaching methods came after he felt "... sufficiently confident about [his] position ..."

Paul similarly expressed frustration with faculty who viewed his teaching as a “copout” and who failed to respect his philosophy or approach to instruction, or the hard work that went into its preparation. As a result, he appreciates the safe and supportive environment he’s created along with his strong background in research to augment his teaching when preparing for promotions and tenure review.

Other faculty like Paul, expressed concern with the more formal Peer Review. Required by the University as part of promotions and tenure review (Faculty Policy Handbook, Section E), it has become increasingly important to faculty that their colleagues share similar teaching philosophies, so as not to be reviewed in an unfavourable manner. When faculty and administration hold different conceptions of teaching, it may work to their disadvantage. Barr and Tagg (1995), in their titled article on paradigm shifts, shared an incident of a professor, who received an unexpected visit from their dean for the purposes of peer review. The dean, observing students working collaboratively in groups and at a considerable noise level, told the faculty member he would return when he or she was “teaching”. Faced with such opposing definitions of teaching, the risk of innovation, both personally and professionally, is daunting. This is especially true when departmental Promotions and Tenure Review committees fail to understand the risk associated with trying something new or the time it takes to develop innovative pedagogy.

Students further pose an element of risk to professors. Lacking perseverance or support, many faculty may return to traditional instructional practice when faced with teaching opposition. Even with support, some faculty may reject innovative practice. Referring to

his own department, Alan shared the experience of one faculty member, who upon trying something new unsuccessfully, would not make another attempt, even with the encouragement and support of her peers. In addition to student resistance, the influence of their input on end-of-semester evaluations with their feedback mechanism into promotions and tenure review, further poses risk. Given the subjective way faculty often interpret and react to student feedback, any positive outcomes may be lost in face of negative comments - no matter how minor they might be. Faculty then, lacking an understanding committee who recognize that student evaluations may initially go down when implementing something new or that innovation takes time to develop, may be more cautious in their teaching, or rely more heavily on their research, to ensure his tenured status.

Referring to the research culture Alan believes, “many teachers who try something new, if it bombs, never use it again . . . For whatever reason . . . that seems to be the way people react. We’d never react that way in our research! You go into a lab and try something for the first time. You’d be surprised if it worked. In fact, you would try it a few more times. You reserve judgement on the evaluation. Around teaching, for whatever host of reasons, we don’t tend to reserve judgement, we pay a lot of attention to the negative.”

Aside from the risk that faculty assume in trying something new, “stepping out of the spotlight” and relinquishing control in the classroom is another issue. As Sawyer highlighted previously, making the transition to more facilitative learning is “scarier” for beginning teachers and leaves the “game wide open.” As such, he questions “. . . the

ability of other young faculty to explore some of these ideas (teaching innovation) without a lot of institutional support . . . For them to stumble along and take risks is not a good idea at the beginning.” In response, Sawyer advocates a “buddy system” where new faculty observe innovation in practice and receive support in developing their own teaching style and philosophy. This is particularly important in light of Alan’s comments which suggest faculty avoid or hesitate to use collaborative learning when it requires, what Leslie terms, “an active giving up” process. As faculty stories suggest however, with practice, experience, comfort and support, faculty focus less on “ownership over courses” and more on “taking responsibility for the curriculum.”

The question of covering content versus supporting student learning (process) will invariably surface as faculty embrace collaborative learning. Tied closely to faculty perceptions of their educational role and their teaching philosophy, the process of reconciliation is challenging. Danielle, for example, with her idealistic goals, often overestimates what she can accomplish in the span of a semester. As a result, she often negotiates with her students, what reasonably can be achieved in the remaining weeks of the semester. Sam’s realization that there is “. . . no one way you can get across all of the material . . .” encouraged him to reflect critically upon his discipline, and choose theories and frameworks to explain key concepts to his students. Meanwhile, Neluka practices the art of “surveillance” to help choose theory with which to illuminate student learning and personalize their “ah-hahs.” MacGregor (1990: 27) says,

teachers who build their course around group work do not belittle or abandon coverage or skills; indeed, they and their students are seriously and directly confronting matters of understanding and comprehension all

the time. But the burden of 'covering' (and of explicating and relating) has shifted from the teacher alone to the teacher and students together.

As such, movement toward dissolving "the Atlas Complex" (Finkel & Monk, 1983) is greatly achieved.

Beyond risk, faculty are challenged with finding balance with their personal life; their academic workload; and university expectations for teaching, service and research. Faced with trying something different or embarking on something new, Sam for example, finds himself saying, ". . . if you're going to do this, what am I not going to do?"

Operational Issues and Challenges

Inherent in collaborative learning are a number of operational issues. Under this category, assessment is the top concern expressed by faculty. Required as a practice by the institution, many question which approach is best for promoting and supporting student learning. Neluka sums it up appropriately when she says, there is "no magical formula." Each course, each set of students, and each semester is unique. As such, she, like many other faculty I spoke to, aim for a variety of assignments and grading practices which meet various student learning styles, support different instructional goals, and award individual and group efforts. Even so, Paul expressed discomfort at standing in judgement of students, sharing: "I somehow can't get my mind around the idea of doing collaborative learning and then setting an exam where you ask specific questions." He attributes this frustration to his belief that "realistically, students learn different things in his class and that comparing them to one another and assigning a grade is contrary to the spirit of

collaboration.” As a result, Paul offers flexibility in evaluation, emphasizing learning, offering feedback and comments on assignments, allowing students to negotiate grades, and encouraging them to take chances without being penalized.

On a different note, Leslie expressed concern with faculty members who incorporate group work, but mark on an individual basis. She feels this approach ruins the whole point of group learning. Sawyer and Neluka expressed their own discomfort with assessment, but more in terms of specific assessment approaches (i.e. self and peer evaluation). Meanwhile, Alan questions the degree to which the University makes assessment easy, when recruiting practices set high academic standards which attract scholars who have high marks, achieved by an individual and competitive means.

What remains problematic, however, is that faculty members are still the expert witnesses of student learning, and the holders of power relative to the grading process. And, more than any other factor, instructors’ evaluative processes act to divide students, and to press the classroom atmosphere back into a competitive mode (MacGregor, 1990: 27).

As indicated above, many faculty offer latitude in their approach to grading, their use of a variety of assessment approaches, or their involvement of students in the evaluative process.

Second to assessment is the issue of time - (1) time to develop and become comfortable with pedagogical alternatives like collaborative learning, (2) time to plan well thought out collaborative learning initiatives (though many recognize this as a factor for almost any type of teaching), (3) time to prepare students for learning collaboratively, and (4) time to implement discovery versus more didactic forms of instruction over a 12 week semester.

With decreased faculty numbers and larger cohorts of entering year students, faculty often feel overburdened. Given their university commitments (i.e. service, research, and teaching), its challenging to maintain integrity and a high degree of collaboration when class sizes are on the rise and available university resources are increasingly stretched. As Danielle shared, there is an expectation for innovative teaching on-campus, but no formal mechanism installed by the University which values and supports its development. She, like others then, want the University (i.e. tenure and promotion committee) to recognize that whatever innovative teaching they do “that that was different; that that took time; and that that’s worthy of notice.”

In addition to assessment and time, Danielle additionally highlighted the brevity of courses. Personally, she prefers year long courses as they provide the best means to establish community and foreground the personal as part of knowledge production. Neluka similarly shares these sentiments, stating: “I think the semester long [course] works, but in terms of team dynamics, from the students’ point of view, it is not a long term commitment.”

Issues and Challenges associated with the Physical Environment

While collaborative learning is increasingly researched and validated as an effective means of pedagogy in higher education, the structures we have in place do not necessarily support its growth. This is particularly true of University of Guelph classrooms, whose design and construction predominantly support didactic forms of instruction. Built mainly in the late 1960's and early 1970's when the dominant paradigm was lecture, many of

today's classrooms are ill-suited for innovative teaching practices like collaborative learning. Further, their aging conditions and appearance are unattractive, uncomfortable, and in much need of a face lift (Classroom Survey, 1999). Leslie, particularly commented on temperature control, referring to rooms in the MacKinnon building as being too hot or too cold. Fluorescent lighting was another issue for Leslie, commenting on the difficulty it posed in her seeing student faces from which to gage their reaction and understanding of the subject material. She found this to be the case, particularly problematic in larger classroom settings. With cuts in government funding contributing to a reduced faculty population, an increased student enrollment, and a rise in the number of large classes, faculty are challenged with competing for limited resources and obtaining the best classrooms to match their teaching styles and to meet their students' learning needs.

Uncomfortable furniture, bolted to the floor additionally detracts from the physical arrangement many faculty want. According to Sawyer, for example, "there is a certain amount of noise with good collaborative learning . . . You need to be able to gather around tables and get yourself physically placed . . . In the lecture hall, aside from two minute buzz groups, I think you need some physical arrangement where you can gather together and spread out your papers." Flexibility also seems to be key. Alan particularly commented on this point, feeling most classes at Guelph inadequate with their lack of flexibility to move things around or adaptability to suit teaching styles. He believes, for example, that the set-up of a classroom conveys something about student expectations and the overall learning climate. Paul similarly feels this way, stating an undergraduate class of 70 to 100 people, held in a setting with stationary desks and tables, detracts from the

mental space he would like to create. As the following scenario suggests, it detracts from his teaching. When students “. . . walk in [a classroom] and they see the very formal setting with the professor at the middle of the front of the room, with the light on [him/her] . . . , they’re not thinking collaborative learning, they’re thinking [they] can sit back, take some notes, and hear what this person has to say.” Recognizing this, Paul prefers the rooms in Landscape Architecture which lack structure and offer the flexibility of moving chairs and tables, believing this type of setting lends itself better to collaborative learning. Others, like Danielle, prefer the smaller classrooms and seminar rooms found in the MacKinnon building, which lend more to building community. In contrast, Leslie and Sam (physical environment not so much an issue for Sam who feels he can teach anywhere) prefer the newer facilities housed at the Ontario Veterinarian College.

Cultural and Institutional Issues and Challenges

Many faculty concerns with implementing collaborative learning stem in part from the culture of the institution and the practices it engenders. As the stories of each faculty member suggest, a mechanism which provides a safe and supportive environment and which allows professors to develop their teaching, establish comfort with the subject material, become familiar with the norms of their discipline, and provide the necessary resources to teach (i.e. appropriate classroom space, teaching assistant support) does much to diminish the risk associated with implementing alternative forms of instruction and creating a climate that encourages conversation and community about teaching. As Leslie shared, “it’s easier to work in an environment where they formally recognize and appreciate what you do.”

At a departmental level, many professors felt fortunate to work in a unit supportive of teaching. They expressed this support in terms of resources and/or training they received, shared teaching philosophies and practices with their colleagues, an award system recognizing innovative teaching, a promotions and tenure policy advancing faculty on the basis of research *and* teaching, a hiring policy looking for evidence of good teaching, and overall, a safe and comfortable climate to work in. In the larger university community however, departmental support seems to be the exception, not the norm. As Leslie shared, many faculty expressed disbelief at the level of support she received, leading her to question whether teaching is really acknowledged as a core requirement of being a “good academic.”

While many faculty believe the university is moving toward the learning paradigm, they also expressed an element of cynicism with its current status. Danielle, for example, feels the University pays “lip service” to teaching in that it fails to provide a mechanism which allows faculty to develop alternative forms of instruction. Likewise, Leslie points to a University President who uses language supportive of innovation, but who doesn’t provide a means to achieve it. She suggests that if we’re serious about collaborative learning, we need a “collaborative environment” and “systemic change” to help faculty “..find the places in which they thrive best and in which their skills are best used and most challenged.” Unfortunately, the research paradigm continues to shape much of higher education (Boyer, 1990). To combat this phenomenon and move toward a new paradigm supportive of teaching and learning, Leslie suggests “the University needs to consistently support creativity by evaluating teaching as important as research, and providing the

financial and temporal encouragement that has previously been delegated only to research.”

One way the University can support teaching is through a tenure and promotions process which appropriately recognizes, evaluates and rewards effective teaching and learning. Unfortunately this is not currently the case. Peer Review, for example, with its feedback mechanism into T&P⁹ is a faculty concern in terms of University status, especially if observed by someone with a different conception of teaching. Paul certainly appreciates being able to approach his peers and say, “I wonder what went wrong?” without worrying about faculty reporting back to his T&P committee. End of semester student evaluations likewise are worrisome. If a faculty member receives a poor student rating the first time he/she tries something innovative, and if their Promotions and Tenure Review Committee fails to understand the risk associated with trying something new or recognize the amount of time needed to make a successful transition, the outcome may have bearing on future innovation as well as their desired tenured status. Sam, for example, in reflecting upon his junior years, conceded he was more traditional in his research and teaching, and that he “...wouldn’t have tried as much before tenure,” especially if he believed his peers would think it “weird”. Now of course he is more experimental. This example serves to highlight Sawyer’s concerns, which suggest that doing an excellent job of teaching and a mediocre job of research, in the University’s current culture, could be problematic at tenure. While efforts have been made with the introduction of the Teaching Dossier to address these concerns, as Danielle shared, some may view its application as another level

⁹T&P = tenure and promotion

of bureaucratization.

On a policy level, Sam is frustrated by administrative red tape which has made his efforts to co-teach with faculty from other departments - tedious. For example, two sets of course numbers in the undergraduate calendar have to be arranged; students have to register under one of two different departments; and course funding has to be negotiated. From his perspective, the overall message conveyed suggests “the university does not deal well with interdepartmental, interdisciplinary stuff . . . and that the interdisciplinary stuff is always considered kind of marginal . . . ” Given the cutback in university funding and resources, Sam questions why the University doesn’t do more to support interdisciplinary, collaborative initiatives.

Other policy concerns reflect enrollment management practices which recruit more students and result in larger class sizes. Many feel this puts a strain on existing resources, making it increasingly difficult for faculty to obtain the classrooms which meet their teaching styles and offer a physical arrangement that is both flexible and complimentary to learner needs. Neluka, for example, goes to great lengths to obtain appropriate classroom space. She worries however, like her colleagues, that if other instructors similarly become demanding, problems could arise. From an operational perspective, larger classroom numbers challenge the extent to which collaborative learning may be implemented. Given that its success rests on the instructor’s ability to manage the environment and plan well thought out learning activities which support the principles of collaborative learning, the ability of even the most seasoned faculty member is tested.

Not to be left out, Danielle and Neluka, additionally note the brevity of the semester system which fails to support positive group dynamics and the building of community. Meanwhile, Alan and Paul highlight University assessment and grading practices which engender competition between students, rather than mutual interdependence.

On top of everything else, time and workload need to be addressed. Balancing University expectations for teaching, research, and service with faculty initiative to be innovative and supportive of student learning is increasingly difficult. In the words of Sam, when faced with trying something new, “you have to say [to yourself], if you’re going to do this, what am I not going to do?” As Danielle and Leslie both suggest, a mechanism supporting innovation and integrity of teaching is needed.

In light of so many faculty concerns with their own teaching, the physical environment, their students, the operation of collaborative learning and the institution itself, its no wonder lecture continues to dominate as the preferred mode of teaching. Given the shift toward the learning paradigm (Barr & Tagg, 1995) however, and the fact that so many issues and challenges tie back to the University and its culture, the institution has within its power to effect positive change toward teaching and learning.

CHAPTER 6 - Discussion, Recommendations, and Future Research

Introduction

The goal of this study focussed on identifying issues and challenges experienced by University of Guelph faculty when implementing collaborative learning in their undergraduate classrooms. Those challenges were categorized under faculty concerns, students issues, operational challenges, the physical environment, or institutional/cultural factors. While my research achieved this goal and is supported by the available literature, it additionally highlighted other factors important to faculty development and the implementation of collaborative learning. These factors became apparent as I prepared a case study (or story) for each professor. While the stories were originally constructed as a data management tool, analysis unveiled the significance of journey and reflection as faculty develop as teachers. This, perhaps, more than the identified issues and challenges, is the most unique finding of the study. As such, the remaining part of this chapter summarizes the issues and challenges identified, underscores implications for the University of Guelph, highlights the significance of journey and reflection, suggests mechanisms to support faculty development and innovate practices like collaborative learning, offers recommendations to the University of Guelph, and finally, makes suggestions for future research.

Issues and Challenges

Because the following issues are interlinked, the ability to isolate discussion of a particular challenge to anyone category is limited. As a result, overlap between sections and/and

reference to other sections occurred.

Students

Faculty encountered many challenges posed by students when implementing collaborative learning. The literature supports each of them and further highlights others (Felder & Brent, 1996; Lawrence, 1997b, Woods, 1994; Matthews, 1996; MacGregor, 1990; and others). The main ones identified in this study, include: (1) helping students reconceptualize their role(s) as active, constructive learners who take ownership for their learning; (2) dealing with student resistance resulting from learner expectations for greater teacher authority and direct learning; (3) reorienting students to working interdependently with their peers (i.e. group) rather than alone and in competition; (4) developing competencies supportive of collaborative learning such as group dynamics, communications, higher order thinking, and listening skills; and (5) recasting students' passive approach to learning and poor classroom preparation, often associated with lack of motivation, commitment, maturity, and other university priorities. This list is by no means exhaustive, but highlights many issues and challenges experienced by University of Guelph faculty in the process of implementing collaborative learning.

The implications of these findings have significance for the introduction of the collaborative model in undergraduate education at the University of Guelph.

Collaborative learning, for example, is not a classroom technique that can be implemented at the teacher's whim, but rather, a pedagogical tactic which requires a great deal of planning and thought. Part of that planning requires consideration of student issues, such

as their approach to learning and level of cognitive development. For many students, collaborative learning differs significantly from what they were acculturated to in high school. Throughout their years spent in formal education their instructor, the expert, defined what and how students learned, and whose knowledge was valued. As a result, students finishing high school and entering university cognitively are more apt to be fact-oriented, view learning as a process of memorization, see the professor as the source of all knowledge, and see themselves as containers waiting to receive information (Perry, 1970). Collaborative learning, however, expects students to construct knowledge with their peers through a social inquiry process. This necessitates higher cognitive demands, skills in a range of areas (i.e. communication), active student involvement, the valuing of both peer and individual knowledge and experience, and a certain level of commitment and maturity. For entering year students though, many of these requirements may be new or threatening to their preferred or expected way of learning, especially if the strategies which guaranteed them high marks in high school and which secured them a place in university are no longer valid under the collaborative model.

Given these circumstances, is it reasonable to expect students, especially those new to collaborative learning, to embrace its practice with open arms? In Paul's early use, he learned quickly what students would and would not accept. This was exemplified when a student stood up in one of his classes and yelled at him that teaching students what to learn and telling them what to know is his job. As a result of this incident, Paul now implements a series of learning styles activities in hopes of promoting discussion and awareness of different ways of learning. He also varies the amount of collaborative

learning used in courses, strategically altering it according to the year of students at which the course is aimed (i.e. senior undergrads 1/3 - graduates 2/3). Perhaps, situations like Paul's could have been diminished and student risk assuaged, if the University and its faculty took strategic and graduated efforts to introduce collaborative learning, instead of implementing the *add a course mentality* traditionally practised by higher education when faced with learning deficiencies.

Cognitively it may be inappropriate to expect entering year students to successfully operate within a collaborative learning environment. Just as faculty need time to develop skill and confidence in their teaching, students similarly need time to adjust and become skilled at collaborative learning. As a result, it may be more appropriate to aid students in their first and second years with developing skills and competencies associated with collaborative learning. Chickering and Reisser (1993) suggest students entering university need to develop intellectual, physical/manual, and interpersonal competencies early in their academic career if they are to be successful students. Strategically supporting students' skill development toward collaborative learning then, would be developmentally appropriate.

Helping students develop competencies (i.e. group dynamics skills, communication skills, and interpersonal skills) is an early step faculty can employ. Incorporating these elements into the curriculum and valuing them through assessment and application is the next phase to facilitating their entry into collaborative learning. Of course, sharing the responsibility and power in terms of grading and developing assessment criteria will also help in this

process. Perhaps, if more University of Guelph departments and colleges took initiative to link student learning and knowledge development through an integrated curriculum, the likeliness of compartmentalized learning and resistance towards collaboration would diminish. Sawyer, for example, attributed a lack of student resistance, as a result of many them having taken courses in the same stream of study designed to develop student skills, build and expand learner knowledge, and foster continued learning with the same cohort of peers.

Faculty can also employ other initiatives. Valuing a range of knowledges and teaching students to question those accepted, like Danielle does, may similarly help students remove blinders to other ways of knowing. Helping students become reflective, metacognitive learners through practices such as journal writing may further prepare students for collaborative learning. These are but a few options that with creative planning on the part of faculty and initiative on the part of departments and colleges, support students and bring about integrated curricula.

Faculty

Faculty also experienced personal issues and challenges as they orchestrated collaborative learning. Central to their concerns was the element of risk; however, other factors similarly identified in the literature, also proved challenging (Knapper, 1995; Boyer, 1990; Cerbin, 1993; Palmer, 1993; Palmer 1987; Matthews, 1996; Felder & Brent, 1996; Tiberius, 1986; Wren & Harris-Schmidt, 1991; Barr & Tagg, 1995; Lawrence, 1996; Meyers & Jones, 1993; Bonwell & Eison, 1991; MacGregor, 1990; Finkel & Monk, 1983;

Boggs, 1999). They include: (1) lack of training in pedagogy or practice teaching; (2) balancing academic workload and university expectations given the time needed to develop and feel comfortable with alternative pedagogies; (3) lack of institutional support for instruction and teaching innovation; (4) different conceptions of teaching contrary to collaborative learning; (5) dealing with student resistance to collaborative learning; (6) appropriately covering content given the time discovery learning takes; and (7) distancing oneself as the central player in the classroom as equitable relationships with students in the teaching and learning process are formed.

Beginning their university career, the majority of faculty I spoke with had limited teaching experience and lacked training in pedagogy to adequately prepare them for the demands of teaching. Perhaps if their graduate programs had trained them for teaching as they did for research, the “survival mode” Leslie experienced and the distress Neluka expressed would have been diminished. Indeed, at the mention of her early teaching, Neluka cringes, relating “....it was so scary when [I] think what I did to those poor students. I was straight out of a [XXX]. I had never had any exposure to pedagogical issues, and I really didn’t know what I was doing.” Compared with Danielle who had many opportunities during her PhD program to teach, study the protocols of her discipline, and develop an understanding of knowledge and the nature of knowing, she was more experienced at teaching and comfortable in her role as instructor than her colleagues who similarly began teaching at the University of Guelph without such preparation. Indeed, she was more prepared to deal with content issues and take a decentralized role in the classroom having developed an understanding of knowledge development and confidence in her ability to

teach. As the stories of the other six faculty suggest, building experience and gaining confidence in teaching are stepping stones to faculty development as teachers and the implementation of alternative pedagogies like collaborative learning. As Sawyer shared, collaborative learning or one of its many vines, is “scarier” for beginning teachers because “. . . you feel as if you’re losing control and that the game is wide open . . . In a lecture setting you have . . . control. You’re delivering and you know . . . there won’t be any surprises.”

If we are committed to teaching and if it is of primary importance to the institution, efforts to prepare future faculty for their role as teachers should be a priority. Teaching assistant training programs, for example, should introduce students to pedagogy, offer mentoring opportunities, provide feedback on teaching, facilitate a forum for discussion, and supply ongoing professional and personal development opportunities. At the same time, graduate programs should prepare future academics for teaching, as they currently do research. As Boyer (1990: 67) suggests, universities need to

rethink graduate education where professional attitudes and values of the professoriate are most firmly shaped [and] . . . where changes are most urgent if the new scholarship (teaching, research, application, and integration) is to become a reality.

While the University of Guelph does not currently offer an integrated approach to graduate education, it does offer a credit course on teaching and theory¹⁰. Unfortunately, attendance is voluntary and participation is limited in numbers. Efforts to develop in

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University Teaching: Theory and Practice (course title) introduces students to pedagogical issues, while offering opportunities to practice teaching and receive feedback.

graduates, a strong footing in teaching and regard for its importance, would do much to value and promote its pursuit as a scholarly activity. As Cerbin (1993: 1) suggests,

teaching will not be accepted by the professoriate as authentic scholarship until it advocates and offers alternative models of teaching as complex, problematic, intellectually challenging, and creative work. Faculty must be drawn to teaching for the same reason they are drawn to scholarship and research.

Perhaps if this was more the case, university expectations of faculty would be more equitable, academic workloads would be more reasonable, and the risk associated with collaborative learning (or other innovative practices) would be diminished.

To achieve these goals faculty need institutional support in terms of incentives, reward structures, and equitable procedures for evaluating teaching (i.e. tenure and promotion). Currently, the University of Guelph expects faculty to research, teach, and perform service; however, departmental Promotions and Tenure Review committees tend to advance professors on the basis of research. The faculty I spoke with reiterated this point several times. As a result, many of them played the “tenure game” where they endeavoured to be innovative with collaborative learning, but relied on their research background to guarantee tenured status. While they achieved the goal of tenure, their commitment of time and effort was substantial.

End-of-semester student evaluations and formal Peer Review also posed risk for promotion. If students did poorly in a course or preferred other modes of learning, for example, the risk of low ratings was heightened. Likewise, if faculty were observed by instructors holding contrary conceptions of teaching, they risked being reviewed

unfavourably. Of course, had Promotions and Tenure Review committee understood both the risks associated with collaborative learning and the time it takes to make the transition to its successful innovative practice, faculty apprehension may have been lessened. Little wonder professors isolate their teaching from public scrutiny and embrace collaborative learning later in their career, rather than sooner.

This privatization speaks to a lack of community within institutions and the tendency of faculty to view themselves as individuals, instead of members of a larger teaching population. Palmer (1987: 20) suggests, “we need a way of thinking about community . . . that relates it to the central mission of the academy - the generation and transmission of knowledge.” Unfortunately, many professors shield their teaching “behind closed doors.” They find it both difficult and unnatural to visit colleagues and initiate discussion about pedagogy and instruction. Given the insight to teaching (i.e. collaborative learning) that comes with mentoring, sharing ideas and resources, and observing peers in practice, it’s a shame the University of Guelph does not do more to engender a culture which invites dialogue on all levels and goes beyond discussion of mere technique (Palmer, 1990; 1993). While University administration cannot prescribe conversation or a certain way of teaching, they can surround faculty with “expectations”, “invitations,” “pathways,” and “permissions” to do things they want to do, but previously felt unable (Palmer, 1993).

Operational Issues

Incumbent with instructional practices are operational issues and challenges.

Collaborative learning is no different. Faculty in this study identified assessment and time

as the major issues. They further highlighted the brevity of the semester system and overall class size as problematic. Assessment, by far, was their top concern with faculty questioning the best way to assess the outcomes of student learning, grade student achievement, support collaboration, and deal with their own and their students' discomfort with evaluation (MacGregor, 1990; Matthews, 1996). Second to assessment was the issue of time - time to develop comfort with the practice of collaborative learning, time to plan activities and create an environment for collaborative learning, time to prepare students for collaborative learning, and time to cover content and establish community within a short semester (Lawrence, 1996; Bruffee, 1993, Matthews, 1996; MacGregor, 1990; Sheridan, 1989). Finally, class size, particularly large class settings - increasingly the trend in higher education - proved challenging in terms of course planning. Indeed, as the number of students in classrooms reach the hundreds, the ability of faculty to effectively implement collaborative learning becomes compromised (i.e. lack of community, isolation, etcetera).

Required by the institution, grading and assessment are ongoing challenges for faculty. Like good teaching, their ability to evaluate effectively takes time and practice to develop. Assessment also requires continuous alterations and refinement. As Neluka's observed, there is "no magic formula" or perfect "grading scheme" to which she can say, "Yes! This is it!" Lastly, faculty must be attuned to the authority they hold in assessment and the competition it potentially creates in the classroom. As MacGregor (1990: 27) notes "... faculty members are still the expert witnesses of student learning, and the holders of power relative to the grading process." In response, Paul cautions the use of traditional

assessment methods believing authority and competition work “contrary to the spirit of collaboration.”

University of Guelph faculty, with the support of the institution, can address many of these concerns. To help faculty develop competence with grading and assessment, Teaching Support Services could address this issue as a key topic during New Faculty Orientation. Providing ongoing workshops and seminars on various assessment techniques in support of innovative teaching would also be of benefit. Likewise, offering consultations and linking faculty with other instructors who incorporate similar practices in their classroom would help. To address issues of power and authority, faculty might consider alternative forms of assessment which develop student ability to judge their own work. The faculty I spoke with offered the following suggestions: employ peer and self evaluation, let students develop evaluation criteria and/or assessment tools, award individual and group efforts, allow students to negotiate grades, and many more. The options are limitless. They require but time, creativity, and a willingness to share authority in the classroom and to trust students.

Finding time and balancing workload however, is increasingly difficult for University instructors, especially when faced with a declining faculty population, a growing student body, a rising number of large-sized classes, and University expectations for research, service, and teaching. For faculty who have reached a level of comfort in their teaching and are both ready and interested in exploring pedagogical alternatives, the task is somewhat daunting. As Sam discovered when trying something new, “you have to say [to

yourself], if your going to do this, what am I not going to do?” Danielle and Leslie similarly expressed frustration with a University that espouses quality teaching, but fails to value and set aside time to work on pedagogical innovation. As Danielle found, “it has to be done on a voluntary basis wherever you can fit it in.” Alan further notes that “trying out a number of these things (innovative practice) takes time . . . [and is] going to take . . . a bit of a learning curve to get things working” both for himself and his students.

The success of collaborative learning rests on the amount of time devoted toward its preparation and design, and to orienting students to its practice. Where instructors under the *wiseman model*¹¹ demonstrate their expertise through the knowledge they hold and their ability to transmit information to students, teachers implementing collaborative learning reveal their expertise through their ability to provide optimal learning environments and interactive learning activities which support knowledge development. Because collaborative learning is new to many students and is not the dominant approach to teaching, efforts to orient students or “reframe” their role under collaborative learning is further needed. As Sam shared, “students have particular ideas of what they’re going to get out of . . . class. If you do something different, students get upset because you’re the exception . . . They’re so busy, they don’t have time to second guess what this professor wants versus what all other professors want. They get annoyed with innovation.”

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The wiseman model embodies a traditional teaching philosophy, where instructors are viewed as experts whose job it is to transmit knowledge to students (empty vessels). They are the authority, and control what is taught and whose knowledge is valued. Lecture is the preferred mode of these faculty.

To provide faculty adequate time to teach and to support professors in developing various approaches such as collaborative learning, the University of Guelph would be wise to value and promote teaching as a scholarly act. This could be achieved in many ways. As Danielle and Leslie suggest, providing a reduced course load or affording a partial or full sabbatical to develop alternative pedagogies would be helpful. Rewarding and recognizing teaching in an equitable manner would additionally provide faculty with the motivation and incentive to break free from “the rut” - a term Lawrence (1996) uses to describe the familiar and secure route professors (and students) often travel versus new paths which embody greater personal risk. Finally, developing a model promoting different academic ranks as faculty progress as instructors would also support teaching. Cerbin (1993) suggests beginning with an introductory period (i.e. 3-5 years) where novice faculty have the opportunity develop effective teaching skills, confidence in their ability, and comfort with their various teaching roles. Seasoned faculty, of course, would be expected to demonstrate advanced teaching (i.e. teaching first year students), while expert faculty would address more challenging learning situations. In light of faculty stories which suggest a progression in teaching as instructors experience and reflect upon various incidents in their teaching journey, this model seems appropriate.

Physical Environment

The importance of the physical environment to educational contexts, cannot be left unattended. For example, White (1972 as cited in Vosko & Hiemstra, 1988: 185) established that while “. . . seventy-five percent of learning is [generally] accounted for by motivation, meaningfulness, and memory, the remaining twenty-five percent . . . is

dependent on the effects of the physical environment.” The faculty I spoke with would tend to agree, having noted many detractive qualities about University of Guelph classrooms which influence the teaching and learning process (Owu, 1992; Fulton, 1991/1992; Blackett & Stanfield, 1994; Vosko & Hiemstra, 1988; Vahala & Winston, 1994; Babey, 1991).

Leslie, for example, was most vocal about the conditions of University of Guelph classrooms, referring specifically to problems associated with lighting and temperature. Fluorescent lighting, she stated, diminished her ability to see student faces and gauge their reaction to the learning material. In regards to classroom temperature (i.e. too hot or cold), Leslie felt it distracted students from their learning and took away from the overall classroom environment. Other faculty commented on poor aesthetics (i.e. old, dingy, in need of a facelift) and the absence of comfort (i.e. broken, ill-sized, old furniture). More pointedly, faculty noted the lack of appropriate classrooms (i.e. size, availability) and the inadequacy of their physical arrangement (i.e. stationary vs moveable tables and chairs). These two qualities alone, according to the faculty I spoke with, failed to support their collaborative approach to teaching or project the mental space they desired. Paul, for example, believes traditional lecture settings communicate expectations contrary to collaboration. Indeed, Vahala and Winston (1994) suggest environments, like people, have “personalities.” Only one faculty member said he could teach in most any classroom environment. It’s worth noting however that he indicated a preference for newer facilities versus older ones.

While faculty have little control over the current state of classrooms, the University of Guelph can invite their feedback as facilities are renovated and new educational spaces are built. The recent Classroom Survey (1999) and the provision of funds to upgrade instructional space at the University of Guelph is a step in the right direction. However, efforts by the University to implement a long term plan which funds continued renovations and the building of new educational spaces should also be initiated. A defined policy and a publicized mechanism inviting faculty and students to report maintenance and damage concerns would similarly aid in this process. At the very least, the University of Guelph should provide appropriate funding and resources to adequately maintain classes so they are clean (i.e. chalkboard wiped, chalk dust removed, garbage regularly disposed), comfortable (i.e. window shading, appropriate lighting), and in a good state of repair (i.e. no broken chairs or audio visual equipment, regularly painted). Finally, efforts to work with Classroom Technical Support to adjust classroom furnishings or address design issues should further continue. Outside of the physical structure of classrooms, the University should consider new policy in the designation of classroom space, which accounts for preferred teaching styles of faculty and the learning needs of students. At the faculty level, addressing the impact of classroom structures as part of orienting students to collaborative learning, may additionally prove helpful. This list is by no means exhaustive, but highlights a number of measures the University of Guelph and its faculty can implement.

Institutional/Cultural Factors

By far, the institution and its culture were of top concern. Risk and support were the main

themes identified by University of Guelph faculty which the literature similarly mirrors (Barr & Tagg, 1995; MacGregor, 1990; Boggs, 1999; Bonwell & Eison, 1991; Palmer, 1993; Matthews, 1996; and many more). As many of the issues associated with the institution and its culture have already been addressed, I'll limit discussion to the support mechanisms faculty found invaluable and issues not previously mentioned.

The instructors I spoke with appreciated and enjoyed working in departments that valued and supported good teaching. They shared many facilitative events which moved them along in their development as teachers and toward their use of collaborative learning. They include: (1) the provision of resources (i.e. teaching assistant support); (2) opportunities for training and skill development in alternative pedagogies; (3) an award system recognizing innovative teaching; (4) a tenure and promotions policy advancing faculty by means of research and/or teaching (offers incentive and recognition); (5) a hiring policy looking for evidence of scholarship and teaching experience; (6) shared instructional practices and teaching philosophies between peers; and (7) overall, a comfortable and safe climate to work in. Unfortunately, progressive departments supportive of teaching seem to be the exception, not the rule. As Leslie discovered, many professors express surprise at the level of support her department offers, leaving her to wonder if teaching is acknowledged by the University as being part of a "good academic." Danielle similarly questions University support, feeling administration pays "lip service" to teaching by failing to provide a mechanism which values and develops alternative forms of instruction.

While some University departments offer the types of support faculty need, they and the institution as a whole, similarly inject challenges. The faculty I interviewed identified them as: (1) administrative red tape in association with interdisciplinary and interdepartmental initiatives; (2) enrollment management policy entering more students and increasing the number of large-sized classes; (3) limited number of classrooms supporting various teaching styles; (4) a short semester system; (5) assessment and grading policies engendering competition versus interdependence; (6) time and workload issues; and (7) recognition and reward structures.

Sam identified administrative red tape with respect to interdisciplinary initiatives as being problematic. Indeed, having grown from his experiences with team teaching and in light of a Strategic Planning Document which espouses collaboration, it comes as somewhat of a surprise that a seamless process has yet to be established. It brings into question other practices which similarly hinder collegiality. It also leads me to wonder how faculty can expect students to work collaboratively, when the University can't even model the process itself.

Admittedly there are some factors beyond the University's control which influence policy and practice. Government disinvestment in higher education is one such example. At the University of Guelph, for instance, the number of students admitted each year has consistently grown. More worrisome though is how the University and other institutions in Ontario will respond to the double cohort issue come the fall semester of 2003. As the outcomes of these two challenges have implications for class size, resource availability,

faculty workload, and pedagogical considerations to name a few, how the University of Guelph responds, in light of their Strategic Planning Document which espouses collaboration and learner-centredness, will be very telling.

The Teaching Journey

As discussion in past sections of this chapter has alluded, collaborative learning evolved from a process of journey and reflection as faculty encountered various incidents during their development as university teachers. While researchers such as Boice (1991) and Kugel (1993) have addressed aspects of faculty development, documentation in the literature is limited. The importance of reflection and change is also hidden. In the stories I prepared, each professor's journey is recorded and the occurrence of key events and influencing factors are traced. While their journey's were unique and their significance personal, each faculty member shared in a process of reflection and growth which resulted in change.

In the process of discovery, their concept of teaching evolved from traditional lecture-based methods (characteristic of the instructional paradigm) to more innovative and constructive approaches such as collaborative learning or one of its many "vines" (MacGregor, 1990). At the same time, their focus on content became balanced with process, their assignments became more varied, their teaching philosophies evolved from transmission to dialogue, their established educational settings became more supportive of student learning, their teaching goals became more learner-centred, and their teaching roles became more varied as they decentralized their place in the classroom, moving from

information provider to facilitator, coach, fellow collaborator, and learner to name few. More simply, their development saw a change in focus from self (i.e. How do I survive? What teaching method will provide me control?), to content (i.e. How do I cover the field?), to student (i.e. Do they get it? Have they learned?), and finally to learning (i.e. What's the best way to help students learn? How can I involve students in the learning process?). Reaching the latter stage, faculty achieved a point of readiness where alternative pedagogies, such as collaborative learning, become more attractive with its ability to increase student responsibility, make learning more meaningful, and achieve a democratic learning environment. Interestingly, the successful achievement of this goal, brings about what Finkel and Monk (1983) describe as the "dissolution of the Atlas complex".

In chapter four I outlined three types of events which impacted faculty development: facilitative, illuminative, and major. Briefly, major events and illuminative incidents, whether internally or externally motivated, led to reflection and change in teaching. Major events though had the cumulative impact of many illuminative incidents put together which tended to accelerate development in teachers. In contrast, facilitative incidents provided the means (i.e. skill development) or climate (i.e. faculty support) to be innovative, but lacked the reflective quality characteristic of change that the other two exemplified. As I have already spoken to the value of facilitative events in the previous section, I'll speak to the other two.

During their teaching journey, the faculty I interviewed identified many illuminative and

major incidents which fostered reflection on their classroom practice and change in their teaching and instructional philosophy. Illuminative events were experienced by everyone, while the latter were limited to Sam, Sawyer and Neluka. Major events produced outcomes which accelerated development in teaching and included: gaining skill development in course design, networking with other faculty, experimenting and practising with different teaching approaches, developing insight into student learning, observing other faculty teach, becoming familiar with pedagogical issues and concerns, and overall, increasing confidence and comfort teaching. Illuminative events produced similar outcomes, but not all at once. What's most important to note is that each event served as a building block to improving their effectiveness as instructors, increasing their confidence in teaching, broadening their understanding about knowledge development and the nature of knowing, and most importantly, preparing them (readiness factor) to attempt alternative pedagogies such as collaborative learning.

The University of Guelph, by embracing the model Cerbin (1993) suggests (see section on faculty issues in this chapter) and by initiating the suggestions I have proposed, would contribute to the support and value for teaching (such as collaborative learning), starting with future faculty, onwards to junior professors and seasoned instructors. Of course, setting expectations across campus which view teaching as scholarly, would further help in diminishing the risk associated in general with teaching and specifically with collaborative learning.

Conclusions

In this chapter, I have identified supporting structures and inputs which the University can strategically implement to support the development of teaching and the movement toward alternative pedagogies such as collaborative learning. To sustain these initiatives however - a prevailing culture which supports and values teaching, which views teaching as scholarly, and which rewards teaching appropriately - is needed. As Matthews (1996: 114) points out, “collaborative learning does not occur in a vacuum.” It and other pedagogies are influenced by the institutional culture and the prevailing epistemology or paradigm in higher education (Winters, 1996). The culture or paradigm at the University of Guelph must value teaching as a developmental process, so innovative practice such as collaborative learning can be embraced and supported appropriately. As Donald Kennedy (as cited in Boyer, 1990: 1) remarked, “it is time ‘for us to reaffirm that education - that teaching, in all forms - is the primary task’ of higher education.” Who knows, one day institutions across North America may be known as leading teaching universities, just as Harvard and Berkeley are viewed as leading research institutions.

Recommendations for the University of Guelph

The following recommendations reflect my survey of the literature and the stories of University of Guelph faculty.

1. **Collaborative learning should be introduced to students in a graduated fashion, across the curriculum.**

As noted by faculty, many students are conditioned from prior teaching to be

passive, independent, and fact-oriented learners. Given the nature of collaborative learning which requires higher cognitive demands and active learning strategies, many students tend to be ill-prepared for full fledged collaborative learning. Instead, measures which develop competencies (i.e. communication skills, problem solving skills) and encourage students to be reflective, metacognitive learners developmentally may be more appropriate. This approach, further provides the necessary tools for students to be successful under this model.

2. **The University of Guelph should take proactive measures to develop graduate students as teachers, before starting their professional careers in higher education settings.**

As evidenced by Danielle's experience, faculty who have opportunities to teach, develop competencies, and gain confidence in their instructional role (to name a few), while still graduate students themselves (i.e. TA training, an integrated teaching component in graduate programs, etcetera) are in a better position to begin teaching and to embrace innovation earlier, rather than later in their career.

3. **Departmental hiring committees should look for evidence of good teaching and/or a background in education as part of the recruitment process.**

Many faculty identified a lack of teaching experience or background in pedagogy as major challenges at the beginning their university career. To ensure quality teaching, the University of Guelph - as a learner-centred, teaching-oriented institution - has an obligation to ensure faculty are prepared to teach, or at the very

least, supported in their development.

4. The University of Guelph should develop a model to structure the induction of faculty to teaching.

As the stories in this thesis attest, teaching is a developmental process. It takes time to develop instructional skills and competencies, gain comfort with one's subject material, establish confidence teaching, and become familiar with the norms of one's discipline and department. As a result, any model the University devises, should account for the time and workload of faculty, provide meaningful criteria and substantive distinctions between different academic ranks (i.e. for purposes of evaluation), and offer strategic supports, noted in the stories, as either facilitative, illuminative, or critical events.

5. Teaching Support Services should structure and design instructional development opportunities across the lifespan of faculty careers.

As the faculty's stories demonstrated, innovation most often occurs in mid or late career when professors had established tenured status, mastered instructional competencies, and gained experience teaching. As such, Instructional development initiatives should reflect the personal and professional needs of faculty as they progress through the various stages of teaching. Sam, for example, in trying something new, needed the support and expertise of Teaching Support Services to adequately assess and orient students to team learning.

6. **Both the University of Guelph and individual faculty should recognize and value a range of assessment practices when evaluating student learning.**

As Neluka discovered, there is no one approach that adequately assesses students in all situations. Strategies which support various teaching styles and desired learning outcomes need to be continually revised and supported, no matter what the grade percentages which might result. In the process, issues of authority and power need to be addressed. As Paul shared, traditional examinations work contrary to the spirit of collaboration.

7. **The University of Guelph should institute new policy which designates classrooms, not only on the basis of student numbers, but also the teaching styles of faculty and the learning needs of students.**

Many faculty I spoke with commented on the poor physical arrangement (i.e. bolted furniture) and the availability of appropriate classrooms, complimentary to the desired mental space and the types of teaching approaches and learning goals they preferred.

8. **As new classrooms are built and/or old classrooms are renovated, efforts to involve faculty in the design of multi-functional learning environments should be made.**

Faculty highlighted many design features (structurally and functionally) which worked contrary to their preferred teaching approaches, desired learning goals, and ideal learning spaces. By involving faculty in the design of multi-functional

classrooms, efforts to improve the quality and availability of learning environments can be addressed.

9. **The University of Guelph should make greater efforts to facilitate interdisciplinary initiatives and integrate learning across the curriculum.**

As Sawyer discovered, he experienced less resistance from students who studied in the same specialization and the same cohort of peers, than students without such experiences. Sam additionally noted, that if university policy created less “red tape” in terms of interdepartmental/interdisciplinary initiatives, the frustration of orchestrating collaboration between faculty and departments would be lessened.

10. **The University of Guelph needs to explore new and creative ways to vigorously assess teaching (in addition to teaching dossiers) which recognizes teaching as a scholarly activity, gets to the heart of innovation and student learning, and is appropriately rewarded under Promotions and Tenure review.**

If teaching is to be viewed as scholarly, the qualities associated with research (i.e. complex, problematic, intellectually challenging, and creative work) and the rewards it receives (i.e. promotion and tenure, visibility, opportunities to develop pedagogy) must similarly be associated with teaching. As many of the stories suggest, faculty are less likely to entertain the risks associated with collaborative learning or talk about teaching, until either they achieve tenured status, have a strong background in research, such as Paul, to fall back on, or benefit from a

department who values teaching and supports innovation.

Recommendations for Future Research

Having completed this study and achieved my research objectives, I find myself asking more questions, then generating answers. The list below highlights a select number of those questions.

1. **Are there specific cultural factors within disciplines which inhibit, detract, or support collaborative learning?**

Many faculty I spoke with, highlighted the value of working in a department that shared similar teaching philosophies and instructional practices (i.e. facilitative incidents). Danielle also highlighted that learning the protocols of her discipline challenged her understanding of knowledge development and the nature of knowing. Finally, as Lee Shulman (1987) points out, we must keep in mind that in teaching, the disciplines play a “dual role” - they’re both the basis of practice and what you practice.

2. **Are the issues and challenges identified in this study the same for other University of Guelph faculty who similarly use collaborative learning?**

As I interviewed a limited number of faculty (7) who use collaborative learning, there is some question with regards to its generalizability to other faculty who similarly employ collaborative learning.

3. **Are the barriers identified in this study, similar or the same for faculty who use other approaches to teaching and learning?**

Since teaching is a developmental process, as evidenced by the four stages of growth in the faculty stories, there is some question whether or not the issues and challenges associated with collaborative learning are similar, if not the same, no matter what practice faculty employ.

4. **If a comparable study was performed by another institution, would they similarly unveil the outcome of journey and reflection as faculty develop as teachers?**

The preparation of faculty stories, for example, revealed the importance of journey and reflection. Analysis further identified the types of events (facilitative, illuminative, major) which influenced their teaching as they progressed through the four stages (self, content, student, learning) I noted.

5. **What interventions can be instituted to support the use of collaborative learning by faculty?**

Collaborative learning requires confidence and skill in teaching, not to mention buy-in to a new way of thinking about knowledge development (constructivism). At the same time, faculty are concerned about workload issues, the achievement of tenure, and the perceived risks associated with collaborative learning. How can these concerns be addressed?

6. **How can faculty members best provide support to students engaged in collaborative learning?**

As the faculty I interviewed soon discovered, collaborative learning necessitated them to orient students to this new manner of learning. Having previously been taught in a passive, fact-oriented, and traditional manner the faculty identified many students who were ill-prepared to learn under the collaborative model.

7. **What types of interventions are conducive to promoting positive, professional attitudes towards teaching?**

As I reiterated in chapter six, teaching must be viewed as a scholarly activity and be valued by the institution through a prevailing culture of support, recognition, conversation, and reward. Research which specifies practices and their impact on attitudes, therefore, is needed.

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APPENDIX

Appendix A - Interview Contact Letter

Date

Name

University Address

Dear ----- ,

My name is Jeanette Dayman. I am a graduate student in the Department of Rural Extension Studies. As a graduate student, I am interested in the use of various pedagogical practices, particularly collaborative learning that University of Guelph faculty employ in their classroom. Ron Stoltz, Director of Teaching Support Services, has identified you as one of a handful of innovative faculty members who uses collaborative learning.

As a part of my Master's thesis, I am interested in determining faculty perceptions of barriers to the implementation of collaborative learning in undergraduate programs. With the increase in demand of collaborative group skill by employers and with the SPC (Strategic Planning Commission) document recommending greater collaboration and student-centred learning, this study is both topical and timely.

Through my research , I hope to generate recommendations in the development of effective implementation strategies, to provide suggestions for policy development at this institution, to inform other interested parties of the potential barriers that my occur when implementing collaborative learning, and to identify future areas of study.

With your assistance, my thesis objectives can be met. I would appreciate the opportunity to meet with you in the near future to discuss and gain insight into your experiences with collaborative learning. I will be contacting you by phone in the next couple of weeks to hopefully arrange an interview with you at a convenient time and place of your choice. If you have any questions, please contact me by phone at (519) 837-8048 or by e-mail at jdayman@uoguelph.ca. My thesis advisor, Al Lauzon, is also available for questions at (519) 824-4120, x3379 or by e-mail at allauzon@uoguelph.ca.

Thank you in advance for your time and participation.

Sincerely,

Jeanette Dayman
Department of Rural Extension Studies, OAC

Appendix B - Follow-up E-mail to Interview Contact Letter

To:
CC:
Attach:
Subject:

Dear ----- ,

My name is Jeanette Dayman. I am a graduate student with the Department of Rural Extension Studies.

A few weeks ago I sent you a letter informing you of my interest in studying collaborative learning and inviting you to be a part of that process. Dr. Ron Stoltz, Director of Teaching Support Services, identified you as one of a group of faculty who implement this method with undergraduate students and who might be interested in sharing some classroom experiences with me. I hope this is indeed the case.

I would appreciate it if you would contact me and let me know if you are interested in being a part of my study, one way or the other, as I would like to begin the interview process at the earliest possible date. I can be reached by phone at (519) 837-8048 or through e-mail at jdayman@uoguelph.ca. My thesis advisor, Al Lauzon, is also available to speak with. He can be reached at extension 3379 or by e-mail at allauzon@uoguelph.ca.

Thank you again for your consideration.

Sincerely,

Jeanette Dayman
Rural Extension Studies

Appendix C - Interview Questions

1. What is your philosophy of teaching?
2. How has your philosophy of teaching changed over your teaching career?
3. What influenced this change?
4. What does collaborative learning mean to you?
5. When did you become **interested** in collaborative learning?
6. Why did you become **interested** in collaborative learning?
7. When did you **start** using collaborative learning?
8. Why did you **start** using collaborative learning?
9. What other methods do you use in conjunction with collaborative learning?
10. Did you take any steps to prepare yourself for using collaborative learning?
If YES . . . What were they?
11. Do you take any steps to help students to prepare for collaborative learning?
If YES . . . What are they?
- 11a. How do you get the students to collaborate?
12. Based on your teaching experience, what barriers/challenges have you encountered in the implementation/use of collaborative learning?
13. What could the institution do to better support faculty (you) in implementing collaborative learning?
14. Is there anything else that you would like to add?
15. May I speak with you at a later date if I need to follow-up on a few questions?
16. **Demographic Information?**
 - a. Age Range (years): 26-35 36-45 46-55 56-65
 - b. Academic Status?
 - c. Department?
 - d. Number of Years Teaching in total? At the University of Guelph?
 - e. Are you a tenured faculty member?....If not are you tenure-tracked?

Appendix D - Interview Guide

Interviewer Instructions

- Before meeting with faculty member, check recording equipment.
- Arrive five minutes early.

Introduction

I want to thank you again for meeting with me today. I am really excited about talking to you about collaborative learning. It's something that I am personally intrigued by and which I have spent considerable time researching.

Just to let you know . . . you are one of seven people I am interviewing, and depending on our conversation, this interview may take anywhere from 45 to 90 minutes. Do you have the time?

The set-up of the interview is quite uniform. I will be asking you approximately 16 questions in an attempt to gain insight to your experiences with collaborative learning. At the conclusion of our conversation I have a few demographic inquiries, at which time the interview will formally conclude.

I also want to verify that it is still acceptable to use a recording device. I will have it playing throughout our conversation, but you may turn it off at any point during the interview. The tape will be erased one month after I successfully defend my thesis.

Finally, in accordance with the ethical guidelines set by my department, I have two copies of a consent letter - one for each of us. By signing the letter, you indicate to me that you are comfortable with how this interview will proceed and how I will use the data collected from its proceeding. Likewise, I will make every effort to maintain the confidentiality of our conversation and the data used in my thesis.

Before we start . . . I would like to perform a test of the recording device. Could you say "TEST 1, 2, 3" in your normal speaking voice so I can gauge where to place the recorder?

Thank you.

Questions and Probes

Section One: The Context of the Interview

1. What is your philosophy of teaching?
 - metaphor of teaching
 - teaching versus learning orientation
 - to teach is to . . . ?
2. How has your philosophy of teaching changed over your teaching career?
3. What precipitated this change?

Section Two: The Central Issues of the Interview

Transition: Now that I have a sense of your teaching philosophy and how/if it has changed, I would like to address the issues of collaborative learning more directly. You have been identified as one who uses collaborative learning. Perhaps you could start out by telling me . . .

4. What does collaborative learning mean to you?
 - as opposed to group learning or cooperative learning?
 - is it different from other group methods?
 - more than a set of techniques?
 - how does it tie in with your philosophy of teaching?
5. When did you become **interested** in collaborative learning?
 - was there an event, moment, etc. that you can pinpoint your interest?
 - professional development or conference influence/exposure?
6. Why did you become **interested** in collaborative learning?
 - as opposed to some other innovative pedagogical practice?
 - what about collaborative learning appeals to you more than other methods?
7. When did you **start** using collaborative learning?
 - after you became tenured?
 - from the start of your teaching career?
 - after some revelation/event?
8. Why did you **start** using collaborative learning?
 - to deal with large classes?
 - material/curriculum lent to collaborative learning?
 - easier to manage?

9. What other methods do you use in conjunction with collaborative learning?
 - do you use them together?
 - as appropriate?
 - lectures, other methods?

10. Did you take any steps to prepare yourself for using collaborative learning?

IF YES . . . What were they?

 - professional development?
 - finding a mentor or colleague who uses collaborative learning?
 - attending conferences?
 - lurking on listservs?

11. Do you take any steps to help students to prepare for collaborative learning?

IF YES . . . What are they?

 - handouts?
 - oral presentation?
 - take me to your classroom and tell me what you see and do?

- 11a. How do you get the students to collaborate?
 - do you take them through a series of steps or activities?
 - discussion in first class meeting?

12. Based on your experience, what challenges or issues have you encountered in the implementation of collaborative learning?

Institutional

- culture?
- assessment - how does it impact the process?
- lack of training and support?
- curriculum coverage?
- tenure/faculty evaluation?
- increase in student numbers?
- short semester system?
- teaching versus research?

Students

- professor viewed as opting out of teaching?
- comfort zone of students may be lecture?
- students not acculturated to collaborative learning . . . security issue?
- lack of training/orientation to collaborative learning?
- tunnel vision . . . focussed on light at the end of the tunnel?
- having to trust peers for grades? Performance?
- assessment issues?

Physical Environment

- number of large lectures halls with unmoveable furniture?
- number of seminar rooms with unmoveable furniture?
- lighting? temperature? classroom availability?
- is the room conducive of collaborative learning? Inviting?

Faculty

- content versus process?
- preparation time and management?
- teaching experience and exposure?
- lack of mentors?
- risk inherent in using new methods?
- tenure concerns - faculty evaluated on teaching terms not learning?
- lack of training in education, pedagogy?
- issues of power and control?

13. What could the institution do to better support faculty (you) in implementing collaborative learning?
14. Is there anything else you would like to add?
15. May I speak with you at a later date if I need to follow-up on a few questions?
16. Demographic Information . . .
 - age range (years) 26-35; 36-45; 46-55; 56-65?
 - academic status?
 - number of years teaching?
 - number of years teaching at the University of Guelph?
 - department?
 - are you tenured? tenure track?
 - sex?

Appendix E - Participant Feedback Letter for Stories

Date

Name

Departmental Address

Dear -----,

My name is Jeanette Dayman. You may remember me from last year when I interviewed you for my Master's thesis on collaborative learning. Since then, I have been on a leave of absence, having only recently returned to my studies.

I am not immersed in my data, analysing each of the interview transcripts. In the process of synthesizing the data, I have written a story that documents the teaching journey of each interview participant. Please find enclosed two copies of your own story.

I would appreciate it if you would offer some feedback on how well I have captured and reflected your story. You may have noticed that at points in the narrative I have added additional information or asked for clarification. For the latter, would you please add your comments. On that note, please feel free to offer comment on any aspect of the story in terms of accuracy, tone, etcetera.

As I would like to continue my analysis and chapter writing, I would greatly appreciate having your comments back by Friday, December 18th. I can either stop by your office (or departmental office) to pick-up the second story copy on Friday or beforehand, or if e-mail is more convenient, I can easily send an electronic copy for comment. If you would prefer the latter, please e-mail me at jdayman@uoguelph.ca. I can also be reached at x2468.

Thank you very much for your continued assistance with my thesis.

Sincerely,

Jeanette Dayman
Rural Extension Studies