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Face-to-face and Online Learning Communities and Their Effect on Deep and Surface Approaches to Learning

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Face-to-face and Online Learning Communities and Their Effect on Deep and Surface Approaches to Learning

by

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Abstract

The purpose of the study was to investigate the role of the face-to-face and online learning community in supporting participants' approaches to learning in a blended faculty development program in higher education. Theoretical frameworks used to frame the study were the Community of Inquiry model (Garrison, Anderson & Archer, 2000) and deep and surface approaches to learning (Marton & Saljo, 1976a; Entwistle & Waterston, 1988). The research was conducted as a case study using mixed methods procedures. Data were collected through pre- and post-workshop surveys, interviews, observations, and online discussions. The findings from the study suggested that participants demonstrated a deep approach to learning by gaining a considerable amount of learning, by being highly interested or engaged in the learning process, by applying the learning to their own context, through their desire to excel or improve, by making connections, by being reflective, and by having a sense of satisfaction or confidence. Participants showed a surface approach to learning through low participation in some activities, by barely meeting requirements in some learning tasks, and by forgetting some concepts quickly. The face-to-face learning community appeared to facilitate a deep approach to learning by clarifying or reinforcing concepts, generating ideas, promoting feelings of connection between participants, and inspiring people to do their best work. The online learning community appeared to encourage a deep approach to learning in slightly different ways, such as helping to generate ideas, promoting critical thinking, promoting reflection, encouraging equitable participation, and by impacting the face-to-face learning. Social, cognitive, and teaching presences were documented to occur in the face-to-face learning environment, and each of these presences played a role in encouraging a deep approach to learning by workshop participants. One factor potentially related to a surface approach to learning: the theme, discouraged involvement, was

associated with social and cognitive presences. All three presences, social, cognitive, and teaching, also occurred in the online learning environment, where they tended to promote a deep approach to learning. Implications of the study are that both the online and face-to-face learning communities played an important role in fostering a deep approach to learning for workshop participants, and that the online and face-to-face learning communities offered unique learning benefits to learners.

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CHAPTER ONE: INTRODUCTION

Introductory Statement

Faculty members of higher education institutions in North America have a wide variety of responsibilities, from research and committee work to supervising graduate students, and, of course, teaching. Some faculty members do not receive any education on issues related to teaching, including course design, throughout their entire graduate program of studies, leaving them less prepared for some of the teaching responsibilities ahead. Not only is the nature of post-secondary teaching demanding, but frequent changes to programs, courses, and technologies prompt a response from institutions to assist instructors in preparing for their teaching responsibilities by providing ongoing professional development.

Faculty development can take many forms, including self study, mentoring programs, short training sessions, and cohort programs. All faculty development initiatives can fill a need, and the format chosen may be dependent on identified learning goals (Gillespie & Robertson, 2010). Cohort programs tend to be offered over a week, or over several days with breaks in between. An increasing number of cohort-based programs are offered in blended format, with both face-to-face and online components (deNoyelles, Cobb & Lowe, 2012).

One rationale for offering faculty development as a cohort-based program is the assumption that the peer learning community can enrich the learning experience for all participants (Wenger, 1998). Although it is generally assumed that people learn better in a group setting, we are not certain how the community contributes to learning within a faculty development context, especially the online learning community. According to Garrison and Vaughan (2008), “many have written about faculty development communities but very little research has been conducted into how these communities function or how they affect the

teaching development of the faculty involved" (p. 140). Considering the difficulty that higher education faculty members often have in finding the time to set aside for sustained cohort-based faculty development (Gillespie & Robertson, 2010), it is worthwhile to investigate whether or not they are benefitting from this community approach.

My study examined how the role of the learning community, both online and face-to-face, affected participants' approach to learning in a faculty development workshop in higher education. The research was conducted in a Canadian university between November, 2010, and February, 2012. The results of the study may be useful for people who conduct faculty development in higher education, such as educational developers, people who teach in higher education, and instructors who are interested in participating in cohort-based faculty development programs. I concluded the study by exploring the relationship between the Community of Inquiry (CoI) framework and the online and face-to-face learning communities' effect on approach to learning.

Study Focus and Purpose

The intent of the case study was to investigate how the role of the learning community, both online and face-to-face, affected participants' approaches to learning in a blended faculty development program. First, I needed to understand the ways in which participants were adopting a deep or surface approach to their learning. Then, I examined how the face-to-face and online learning communities made an impact on participants' learning approaches.

Theoretical Perspectives

Critical theoretical perspectives used to frame the study were the Community of Inquiry framework, deep and surface approaches to learning, and blended learning concepts.

Community of Inquiry framework.

The Community of Inquiry framework (Garrison, Anderson & Archer, 2000) provides a way of looking at the learning process where a group of people are working collaboratively toward an educational goal using an inquiry-based process (Garrison & Vaughan, 2008). A Community of Inquiry can be described as follows:

> A critical community of learners, from an educational perspective, is composed of teachers and students transacting with the specific purposes of facilitating, constructing, and validating understanding, and of developing capabilities that will lead to further learning. Such a community encourages cognitive independence and social interdependence simultaneously (Garrison & Anderson, 2003, p. 23).

The CoI framework is used in the study to support the disciplined exploration of how higher order learning is facilitated by a community of learners who are engaged in critical reflection and discourse (Vaughan & Garrison, 2006).

The CoI model describes three interdependent elements that are a part of an educational experience: teaching presence, social presence, and cognitive presence (Garrison, Anderson & Archer, 2000). Teaching presence includes both the design and facilitation of the learning environment and is critical in establishing and sustaining a community of inquiry. Social presence is "the ability of learners to project their personal characteristics into the community of inquiry, thereby presenting themselves to the other participants as "real people" " (Garrison et al., 2000, p. 89). Social presence in an online learning community can help learners to feel a sense of belonging. Cognitive presence is an essential element for learning, and is articulated in the practical inquiry model (Garrison et al., 2000).

The practical inquiry model was developed to assist in the analysis of cognitive presence within online discussions. The model has four phases: triggering event, exploration, integration, and resolution/ application (Garrison et al., 2000). Indicators of triggering events can be posing questions, recognizing a problem, or a sense of puzzlement. Exploration is the search for relevant information about the problem. Integration occurs when learners connect information and ideas to make sense of the problem. The final phase, resolution, happens when various solutions are tested and defended to resolve the problem (Garrison et al., 2000).

Deep and surface approaches to learning.

According to the theory of deep and surface approaches to learning, learners take different approaches to learning tasks. A surface approach to learning is one in which a student tries to do the minimum amount of work in order to get passing grades. The learner is not trying to understand new learning but rather to reproduce content and ideas (Biggs & Tang, 2011). Characteristics of a surface approach to learning include repeating information without adding anything new to it, accepting information passively, and proposing solutions without evaluating them. In contrast to a surface approach, a deep approach to learning is one in which the learner tries to make sense of new information. Learners actively try to understand underlying meanings and themes in addition to focusing on details (Biggs & Tang, 2011). When using a deep approach, learners relate new learning to previous knowledge, make connections, and use evidence to support an idea (Entwistle & Waterston, 1988).

There is potentially a third approach to learning: the achieving or strategic approach. Learners who adopt an achieving approach use whichever strategies work best in terms of maximizing their grades, regardless of whether or not they learn or understand new material

(Biggs & Tang, 2011). Since they are driven by grades, learners using an achieving or strategic approach will select deep or surface approaches strategies to meet assessment demands.

Blended learning.

Blended learning is "the thoughtful fusion of face-to-face and online learning experiences… optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational experience" (Garrison & Vaughan, 2008, p. 5). According to this definition, blended learning is more than selecting content to put in an online environment: the instructor must carefully plan the activities in both delivery modes to capitalize on the strengths of each. Online and face-to-face activities are integrated to build on one another, not as separate, stand-alone instruction.

Research Questions

The research study used the theoretical perspectives of the Community of Inquiry framework, deep and surface approaches to learning, and blended learning to investigate and to inform the following research questions:

1. In what ways do workshop participants take a deep approach to learning in a blended faculty development workshop?
2. In what ways do workshop participants take a surface approach to learning in a blended faculty development workshop?
3. How does the role of the face-to-face learning community affect the approach that participants take to the workshop?
4. How does the role of the online learning community affect the approach that participants take to the workshop?

5. What is the relationship between the Community of Inquiry model and the effects of the learning community on learning approach taken by participants in the workshop?

Personal Interest in the Study

My interest in the study was related to my work context. As an instructional designer in higher education, I facilitate faculty development workshops, work with instructors to design effective courses, and design faculty development in a blended format. The study is not only interesting to me personally, but will benefit me professionally in my daily practice.

Significance of the Study

Current research into the effectiveness of blended faculty development initiatives in higher education is sparse since this type of faculty development is still quite new. Vaughan (2004) studied how a blended learning approach could support an inquiry process in a faculty development learning community. His research used the CoI framework to examine a faculty learning community. Findings for the online discussions indicated that social presence changed over time, from affective communication at the beginning to emphasize group cohesion as the community got to know one another better. Over time, teaching presence became a shared responsibility between the facilitator and the participants. A comparison of face-to-face and online transcripts showed that neither learning community reached the resolution/application phase often, indicating that facilitators may need to pay special attention to helping participants enact the entire inquiry process (Vaughan, 2004). Studies such as these make a significant contribution to our understanding of blended faculty development programs.

Other studies have examined faculty development in an online setting. For example, Villar and de la Rosa (2007) studied an online faculty development program, concluding that the online program allowed for more opportunities for discussion, reflection, and connection of

learning at a professional level than its face-to-face counterpart. Jarosewich and colleagues (2010) studied the level of engagement and critical thinking in online professional development as evidenced through online discussion forums. The researchers found that participants seldom reached levels of advanced critical thinking skills in the forums. In a study of an online professional learning community, Gray and Smyth (2012) found that there was a small group of engaged learners who contributed regularly, while others either read the discussions and information without commenting, or had very low participation. The researchers concluded that participants used the discussion forums for different reasons, in ways that they found personally helpful. Glowacki-Dudka and Brown (2007) did an exploratory study of faculty learning communities. They found that faculty members who participated in structured learning communities benefitted in that new learning related to professional goals and was immediately application to their work context.

While such studies have added to our understanding, there are still many aspects of blended and online faculty development programs that are not yet understood. For example, little is known about how learners approach the different delivery modes of a blended program and how each one contributes to their learning. Few studies have examined if participants take a deep or surface approach to learning, and in what ways. Research on the learning community and how it affects approach to learning is also scarce. My research adds to the growing body of knowledge about faculty development by examining how participants take a deep and surface approach to learning, the role played by both the online and face-to-face learning communities, and how these findings relate to the Community of Inquiry framework.

Definitions

Some of the terms used in the study had more than one meaning. In some cases, such as deep learning approach and surface learning approach, there was no commonly accepted standard definition of the terms. This section outlines the definitions of terms that were used in the study.

Definition of terms relating to faculty professional development.

There are several terms in the study relating to faculty professional development. Professional development is broadly defined as the advancement of skills or expertise through continued education. Although professional development may include personal skills, I will focus on faculty development for the purposes of this study. Faculty development has a narrower focus, and is defined as the advancement of skills or expertise through continued education for faculty. A learning community is one type of faculty development. It is defined as a group of people who have "a general sense of connection, belonging, and comfort that develops over time among members of a group who share purpose or commitment to a common goal" (Conrad, 2005, p. 2).

Definition of terms relating to delivery mode.

Faculty development can be delivered in a variety of formats or modes, including face-to-face, online, and blended. Face-to-face is defined as being within each other's physical presence. A face-to-face learning environment is often used synonymously with a traditional classroom environment. An online learning environment is used to describe learning that is delivered using Internet-based technologies. Blended learning is a term that has many definitions with no commonly accepted standard definition. For the purposes of the study, blended learning is defined as "the thoughtful fusion of face-to-face and online learning experiences… optimally

integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational experience" (Garrison & Vaughan, 2008, p. 5).

Definition of terms relating to deep and surface approaches to learning.

Standard definitions for deep and surface approaches to learning are not evident in the literature. Therefore, the study uses commonly accepted descriptions of the terms instead. A deep approach to learning is one in which learners focus "their learning on the underlying meaning, main ideas, themes, principles and successful applications of their course of study (Howie & Bagnall, 2012, p. 2). A surface approach to learning is an approach in which learners try to meet course requirements with the minimum possible effort (Biggs & Tang, 2011). A possible third approach, called the achieving/strategic approach, is described as an approach characterized by the learner adopting the learning style necessary to succeed in the learning task (Ramsden, 1988).

Definition of terms relating to the Community of Inquiry framework.

A Community of Inquiry is "a cohesive and interactive community of learners whose purpose is to critically analyze, construct, and confirm worthwhile knowledge" through three presences: social presence, teaching presence, and cognitive presence (Garrison & Vaughan, 2008, p. 9). Social presence has been defined as "the ability of learners to project their personal characteristics into the community of inquiry, thereby presenting themselves to the other participants as "real people" " (Garrison et al., 2000, p. 89). Teaching presence has been defined as the "design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educational worthwhile learning outcomes (Anderson, Rourke, Garrison & Archer, 2001, p. 5). Cognitive presence has been defined as the way in

which participants were able to “construct meaning through sustained communication (Garrison et al., 2000, p. 89).

Chapter Summary

The chapters in this dissertation are organized in the following way. Chapter Two presents a review of the literature, starting with research on deep and surface approaches to learning, followed by studies using the Community of Inquiry framework, and faculty learning communities. Chapter Three presents an overview of the methodology used in the mixed methods case study. The findings in relation to the research questions are presented in Chapter Four. Chapter Five includes the discussion and implications for practice and future research. The dissertation is concluded in Chapter Six. Appendices include the survey instruments, interview questions, coding samples, and case study protocol.

CHAPTER TWO: REVIEW OF SELECTED LITERATURE

In the literature review, I explore faculty development, including a definition and purposes of faculty development. Since the research looks at a blended program, I address concepts in blended learning as well. The section on deep and surface approaches to learning looks at overall trends in the research. Next I examine the Community of Inquiry framework, focusing on its application to a faculty development context. The conclusion addresses the need for further research.

Faculty Professional Development

Definition of faculty development.

Faculty development has been defined in different ways and is sometimes used interchangeably with terms such as professional development or educational development. For the purposes of this study though, I will use the term faculty development to mean the advancement of skills or expertise through continued education for faculty. In other words, it is professional development for faculty members.

Purposes of faculty development.

As indicated in the definitions, faculty development can have different purposes; not all initiatives concentrate on teaching quality and enhancement, with the ultimate goal of more effective instruction. Camblin and Steger (2000) listed five emphases:

1. Instructional development: focused on developing skills related to curricula, teaching, and the educational application of technology
2. Professional development: emphasized growth in professional roles, such as supervising graduate students and academic writing
3. Organizational development: enhanced understanding of institutional priorities and needs

4. Career development: looked at career enhancement
5. Personal development: emphasized life planning and interpersonal skills (Camblin & Steger, 2000, p. 3).

Although the goals can be somewhat interrelated, in my study I am primarily interested in the first emphasis, instructional development.

In recent years, faculty development has grown to include topics such as instructional, career, and personal development, which addresses complex needs such as supporting institutional goals and instructors' career trajectories (Camblin & Steger, 2000). Over the past 30 years or so, there has been a greater focus on improving the quality of teaching through faculty development programs (Gillespie & Robertson, 2010; McLoughlin & Samuels, 2002). Additionally, an emerging focus of faculty development is on the Scholarship of Teaching and Learning, which requires instructors to advance their understanding of teaching and learning as it relates to different subjects, audiences, and contexts, as well as up-to-date knowledge in their field (McLoughlin & Samuels, 2002).

Knight, Tait and Yorke (2006) stressed that a great deal of professional development occurs tacitly or informally through the process of everyday tasks such as planning and delivering instruction. While this is undoubtedly true, such tacit learning is not the focus of this literature review or of the study. I will address formal faculty development activities such as workshops, courses, and seminars; specifically, I will look at the blended Course Design Workshop offered by the Teaching & Learning Centre at the University of Calgary. This workshop was chosen because it was offered in a blended format, participants from any faculty were eligible to take the workshop, and I had permission to study it.

Definition of blended learning.

There were a variety of different definitions of blended learning in the literature, with slight variations in meaning. A basic definition was the combination of face-to-face and online learning, but the definition was so broad that it covered courses that were not usually considered to be blended learning, such as traditional face-to-face courses that had online readings. Dziuban, Hartman, and Moskal (2004) defined blended learning as learning experiences that combine face-to-face and online learning, with a corresponding reduction in face-to-face classes. This definition added the dimension of reducing time spent in the classroom, but it did not address the importance of each delivery mode.

For the purposes of the study, I used Garrison and Vaughan's (2008) definition of blended learning: "The thoughtful fusion of face-to-face and online learning experiences… optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational experience" (p. 5). This definition captured the idea that both online and face-to-face delivery modes were important to the learning experience.

Blended approach to faculty development.

Instructors in higher education have demanding schedules with regular classes, meetings, office hours, research activities, and many other commitments that fill their days. Higher education faculty may find it challenging to take professional development programs in which they need to set aside entire days or weeks of time. Instructors who teach in faculties such as social work, education, law, business, and nursing also tend to have numerous responsibilities located off campus (Gillespie & Robertson, 2010). Sessional instructors may have other employment, making it almost impossible for them to participate in such professional

development. Blended learning has the potential to make professional development programs a bit more accessible to people.

While research on professional development offered in a blended format is sparse, there are some studies to inform our practice. Owston, Wideman, Murphy, and Lupshenyuk (2008) conducted a program evaluation of three blended format teacher professional development initiatives. All three of the programs had both online and face-to-face components.

The Advanced Broadband Enabled Learning (ABEL) program was a voluntary professional development initiative in which teachers attended face-to-face summer institutes, while communicating online throughout the school year. They also had access to guest speakers through videoconference at various points throughout the year. There was no structure to the online component; rather, the participants were given the tools to communicate and support to work on collaborative projects (Owston et al., 2008).

A second program, the Learning Connections (LC) project, was modelled after ABEL, but it focused on improving literacy and numeracy teaching skills in elementary school teachers in Ontario. School principals identified individual teachers and asked them to participate in the program. The program had a more defined structure than ABEL, using specialist teachers to facilitate activities and online discussions (Owston et al., 2008).

The third program in the study was called the Teacher e-Learning Project, which continued over two years. In the first year of the program, they held a one-day face-to-face session followed by eight weeks online in which participants discussed implementing ideas from the professional development in their own classrooms. This process occurred four times in the first year of the program and three times in the second year (Owston et al., 2008). Year one focused on teaching mathematics while year two was devoted to science teaching. This program

was the most structured of the three, requiring teachers to do weekly readings and online activities and to write an online reflective journal (Owston et al., 2008).

Data were collected through semi-structured interviews with the teacher participants and project leaders, focus groups with teacher participants, teacher surveys, transcripts of online discussions, in class observations, and observations of activities such as videoconferences (Owston et al., 2008).

Results of the study indicated that the blended programs provided had a moderate influence on teacher participants' classroom practice. Teachers in all three programs examined their pedagogical approaches, including more collaborative and student-centred activities in their classrooms. Programs that were relevant to the teachers' practice were more effective than the programs that were general. The ABEL initiative, which did not have a defined focus, allowed participants to select topics and projects they found relevant, and therefore had the greatest benefit for teachers who decided to participate. Results also indicated that teachers in all three projects had increased confidence in experimenting with different approaches to teaching science and technology as a result of the professional development (Owston et al., 2008).

A comparison of the three programs revealed an interesting finding regarding the implementation of the blended learning programs. While ABEL had the highest flexibility, it came with both benefits and challenges. Teachers who participated benefitted from selecting topics and projects of their choice, allowing them to make it relevant to their teaching context. However, ABEL had low online participation since it did not have structured activities online. The Teaching e-Learning Project, on the other hand, was more structured, resulting in higher online participation. The study's researchers suggest that faculty developers design blended

programs to take advantage of the strengths of the delivery modes and be aware of some of the potential trade-offs associated with program structure and flexibility (Owston et al., 2008).

In another study, deNoyelles, Cobb, and Lowe (2012) examined participants' satisfaction and perceptions of goal attainment in a blended faculty development workshop. The researchers compared a face-to-face course design workshop with a redesigned, blended version of the same workshop to investigate faculty members' experiences of the two. This mixed methods study used both Likert-scale and open-ended survey questions. There were 15 survey respondents for the original workshop, and 50 survey respondents who took the redesigned, blended workshop. Numbers were far greater for the blended workshop since the facilitators stated it was mandatory for participants to complete them (deNoyelles et al., 2012).

Results of the study indicated that participants showed a higher rate of satisfaction in the redesigned, blended workshop, than in the totally face-to-face version of the workshop. Satisfaction rates (satisfied and very satisfied) for the blended version were 95.7%, while for the face-to-face version, satisfaction rates were 83.3%. Additionally, there were no participants who indicated dissatisfaction with the blended offering, whereas 16.7% were dissatisfied with the face-to-face version of the workshop (deNoyelles et al., 2012).

Participants' self-reports of goal attainment indicated that the blended version of the workshop was more effective in allowing them to achieve goals relating to workshop. The researchers stated that there were three factors that contributed to participants' increased achievement of goals in the blended workshop. First, by reducing time in the face-to-face sessions, many of the teaching and learning activities were moved online, allowing faculty members to access them at their own pace and convenience. Participants could thereby move quickly through topics that were less relevant to them or about which they already knew a great

deal. Conversely, they were able to spend extra time and go into depth on topics of importance to them. Second, facilitators redesigned the blended version of the workshop based on adult learning principles such as high relevance and application to one's own context. Third, the original workshop relied more heavily on independent work while the redesigned workshop included more peer activities such as feedback (deNoyelles et al., 2012).

Vaughan (2004) did a comprehensive study to see how a blended faculty development workshop could support an inquiry process. The researcher used a naturalistic inquiry research method. Data were collected through surveys, content analysis of online discussions and transcripts of face-to-face discussions, interviews, focus groups, and documents. Vaughan's (2004) research used the Community of Inquiry model to frame his study.

Findings from the online community indicated that social presence changed over time, from an emphasis on affective communication (for example, presenting personal details such as work position, department and faculty) at the beginning to group cohesion as the community got to know one another better. Aspects of group cohesion include addressing people by name and using phatics and salutations such as greetings. Teaching presence also changed over time. The early face-to-face discussions included more discussion around design and organization, which lessened over time as direct instruction increased. Facilitating discourse includes identifying areas of agreement and disagreement amongst learners, trying to reach a consensus in understanding, encouraging and acknowledging learners' contributions, setting the learning climate, prompting discussion, and assessing the learning process (Garrison et al., 2000). It was predominant during the first online discussion but decreased by the end while direct instruction increased (Vaughan, 2004). Content analysis of both online and face-to-face transcripts indicated that the most prevalent phase of cognitive presence was exploration, with the final stage

(resolution/application) having the least number of occurrences. However, interview and focus group data indicated that all four stages of the practical inquiry model were evident in both face-to-face and online discussions (Vaughan, 2004).

Studies such as these make a significant contribution to our understanding of blended faculty development programs. However, as Vaughan (2004) has stated, there are few models in the literature to guide the design of a blended learning faculty development program.

Deep and Surface Approaches to Learning

Origins of the theory.

In their seminal work, Marton and Saljo (1976a) coined the terms surface-level and deep-level processing to describe different ways in which students in higher education comprehended the meaning of a passage of text. In their first study of Swedish university students' reading comprehension, the researchers asked 40 students to read a passage and then assessed them on their understanding of it. Participants' answers were classified as understanding the message of the passage, partially understanding the message, recalling information from the passage, and recalling very little from the passage. Participants were examined on the same passage six weeks later to study long-term retention. Marton and Saljo (1976a) found that students not only remembered differing amounts of information, they also understood the information differently. Surface-level processing, they explained, was when students adopted a rote learning strategy in an attempt to reproduce information. Deep-level processing occurred when students tried to understand what the information meant (Marton & Saljo, 1976a). Students who had used deep-level processing remembered more about the passage six weeks later than students who had used surface-level processing.

Marton and Saljo's (1976a) second study involved 30 university students who were directed to read a newspaper article. They were asked to summarize the article in one or two sentences, and the participants' answers were again classified according to their understanding of the article. About five weeks later, they answered the questions again. Results of the study indicated that some students used surface-level processing to focus on the words, or "the discourse itself or the recall of it" (Marton & Saljob, 1976a, p. 9) while others exhibited deep-level processing, focusing on "what is signified" or "what the discourse is about" (Marton & Saljo, 1976a, p. 9).

Other researchers have expanded on the idea of deep and surface approaches to learning. Ramsden (1981, in Entwistle & Waterston, 1988) introduced a third approach to learning: the strategic or achieving approach, in which students adapted their approach to suit the assessment, thereby maximizing grades. There was no consensus as to whether or not there were three distinct learning approaches, or if deep and surface were the only two approaches to learning supported by the research.

Approach to learning is not fixed within the learner or necessarily stable across learning tasks. Learners may show a deep approach to learning in some contexts, and a surface approach in others. Thus, it is the approach that is considered to be either deep or surface, not the learner (Ramsden, 2003). Also, it is possible for learners to change their approach over time, from deep to surface or surface to deep. Learning approach is therefore changeable, subject to interplaying personal and contextual factors (Aharony, 2006). Aharony (2006) studied deep and surface strategies in the context of Internet-based instruction in four junior and senior high schools in Israel. In his study of 148 students, results showed that students had a preferred approach to learning, but it was not permanent. Aharony (2006) found it was possible to change students'

approach to learning, not with sporadic efforts, but with sustained, meaningful learning experiences.

In subsequent sections, both surface and deep approaches to learning, along with achieving or strategic approaches, and preferable approaches to learning are explored in detail.

Surface approach to learning.

There were no standard definitions for deep and surface approaches to learning in the literature (Entwistle, 2000; Trigwell & Prosser, 1991; Biggs & Tang, 2011; Baeten, Dochy & Struyven, 2008). Rather, there were several descriptions of the terms (Howie & Bagnall, 2012). Some research suggested that a surface approach to learning was evident when a student tried to do the minimum amount of work acceptable, cutting corners where possible, in order to get a passing grade. The learner used a lower level of cognitive activity such as memorization, yet did enough work to get by in a course (Biggs & Tang, 2011).

Studies showed that a variety of personal and contextual factors contributed to a student adopting a surface approach to learning (Aharony, 2006; Baeten et al., 2010). Personal factors included an acceptance of minimal passing grades, focus on non-academic priorities, lack of time, high academic workload, misunderstanding the course or assignment requirements, heightened anxiety, and an inability to do the work (Biggs & Tang, 2011; Andrews, Garrison & Magnusson, 1996). Contextual factors that tended to contribute to a surface approach to learning included teaching topics and concepts as discrete items rather than emphasizing connections and structure, assessing students on rote memorization, teaching in a cynical way, providing insufficient time for students to engage with the content, high course workload, and teaching in a way that contributed to student anxiety (Biggs & Tang, 2011).

In addition to student and contextual factors, it is possible that student perceptions might affect learning approach. For example, if students perceive that a course assignment is unimportant (even if this is not the case), they may adopt a surface approach for that task. Other perceived contextual factors may include workload, clarity of learning goals, and relevance (Baeten, Kyndt, Struyven & Dochy, 2010). In their review of the literature, Baeten et al. (2010) synthesized the results of 118 research studies relating to learning approaches and student-centred learning. They concluded that not only did contextual factors influence students' approach to learning, but students' perceptions of contextual factors affected approach to learning as well.

Characteristics of a surface approach included focusing on the words and sentences of a text rather than their meaning, memorizing information, and learning facts without making connections (Ramsden, 2003; Entwistle, 2001). Entwistle and Waterston (1988) conducted a quantitative study of 218 university students, most in the first year of their program. They used a 64-item survey to investigate students' approaches to studying. They offered the following characteristics of surface processing: repeating something without adding new elements or personal comments, proposing solutions without explanations, judging without offering a rationale, and asking questions that are irrelevant to the problem or do not contribute to its understanding (Entwistle & Waterston, 1988). Evans and Honour (1997) conducted a study on the creation of learning materials with 140 education students, most in the fourth year of their studies. The researchers analyzed the materials created by the students to gauge the extent to which participants conveyed complex cultural ideas. They stated that accepting new ideas and information passively and learning with the intention to reproduce content were also characteristics of a surface approach to learning (Evans & Honour, 1997).

Deep approach to learning.

A deep approach to learning, on the other hand, was described in the literature as one in which students felt the need to "engage the task appropriately and meaningfully... to focus on underlying meanings, on main ideas, themes, principles or successful applications" (Biggs & Tang, 2011, p. 26). With a deep approach, students not only focused on the details but also tried to understand the big picture and how details related to one another. In their quantitative study of 218 university students, Entwistle and Waterston (1988) defined deep processing as "the extent to which a student critically evaluates, conceptually organises, and compares and contrasts information being studied" (p. 259). This definition was not standard in the literature, though.

Personal factors that tended to encourage a deep approach to learning included curiosity about the subject, motivation to do well in one's academic work, the ability to work at a conceptual level, and personal preference for working conceptually. Contextual features that encouraged a deep approach to learning were teaching about the structure of a topic, involving students in the learning process by using techniques such as questioning and posing problems, building on what students already knew, addressing student misconceptions, assessing for concepts rather than discrete factual information, and encouraging a positive learning environment (Biggs & Tang, 2011). Trigwell and Prosser (1991) conducted a mixed methods study of 143 first-year students to examine learning context, approach to learning, and learning outcomes in terms of student grades. They identified the following factors within the instructor's control as promoting a deep approach to learning: effective feedback to students, clear objectives, clear expectations and assessment criteria, interesting and relevant course, opportunities for questions and consultation, good explanations, making an effort to understand students' difficulties, and allowing students some choice (Trigwell & Prosser, 1991).

Enwistle and Waterston (1988) noted that characteristics of deep processing included adapting information to create something new, proposing solutions based on evidence and judgment, supporting a stance with proof, collecting multidisciplinary evidence to support an idea, and developing new strategies. Ramsden (2003) added that a deep approach was typified by relating new learning to previous knowledge, organizing information into a coherent structure, and making multidisciplinary connections.

Achieving or strategic approach to learning.

Some of the literature suggested that there could be a third approach to learning, called the achieving or strategic approach (Entwistle & Waterston, 1988; Ramsden, 1993; Biggs, 1993). Students who used this approach tried to maximize their grades by adopting appropriate strategies for a course's assessment. Effective study skills and awareness of a course's student assessment strategies were characteristics of an achieving approach (Biggs & Tang, 2011). Students who adopted an achieving approach used a combination of strategies and techniques to achieve high grades, regardless of whether that leads them to an understanding of the material (Entwistle, 2001). In his conference paper, Entwistle (2000) suggested that instead of a learning approach, achieving or strategic was an approach to studying, and that learners took this approach in response to the demands of assessment. They gauged the assessment process, their study skills and time management, and adjusted accordingly to get the best possible outcome in terms of grades.

Preferable approach.

Some studies have indicated that a deep approach to learning was preferable in terms of student learning. Phan (2008) conducted a study of 298 students attending a Pacific university. Participants completed a survey examining approach to learning, which was compared with

course grades. Results of the study indicated that mastery learning goals, which were more likely to be associated with a deep approach to learning, tended to result in higher academic achievement as measured by final grade in the course. A work avoidance orientation, more likely to be associated with a surface approach to learning, was negatively related to academic achievement (Phan, 2008). Trigwell and Prosser (1991) also found a positive relationship between a deep approach to learning and learning outcomes.

Implicit in the literature on deep and surface approaches to learning is the assumption that a deep approach to learning was preferable to a surface approach. In their critique of the approach to learning model, Howie and Bagnall (2012) noted that some of the assumptions underlining the model of deep and surface learning approaches have not been supported by the research. For example, it was assumed that a deep approach had better educational results than a surface approach, though this was rarely discussed in the literature (Howie & Bagnall, 2012). It has not been established that a deep approach to learning always results in better learning than a surface approach. For example, some studies investigating Asian student learning approaches showed that they have typically taken a surface approach to their studies. Kember and Gow (1991) used Biggs' (1987) Study Process Questionnaire with 2143 students in Hong Kong to determine their study habits. Their study showed that some of the learners who took a surface approach to learning achieved a thorough understanding of the material. In a study of students' approaches to learning and academic achievement, Gijbels, Van de Watering, Dochy, and Van den Bossche (2005) administered the Study Process Questionnaire (Biggs, 1987) to 133 second-year law students, and data from the questionnaire were compared to final exam results. Gijbels et al. (2005) found no relationship between learning approaches and achievement on a multiple-choice exam designed to test aspects of problem solving. The researchers theorized that students'

perceptions of multiple-choice exams were that they tested for factual knowledge, which impacted on their learning approach. Such results contradicted assumptions of the deep and surface model. More research needs to be done in this area to identify whether there may be circumstances in which a surface approach to learning is preferable.

Changes in approach over time.

In their research on university students' learning approach over time, Lietz and Matthews (2010) administered the Study Process Questionnaire (Biggs, 1987) to 408 students at a German university who were studying programs in arts and science. There was no intervention between the first and second administration of the survey, and the researchers found no significant change in students' surface approach to learning over a three-year time span. However, they noted a significant drop in deep approach to learning between the first and second year of the same students. These students showed a decline in the achieving approach between first and second year, as well as second and third year. The research suggested that of the three approaches to learning, the strategic or achieving approach was the most susceptible to change over time (Lietz & Matthews, 2010). The researchers noted that a decrease in deep approaches to learning over the course of a degree was a concern for instructors and administrators in higher education. The researchers speculated that first-year students began their program of studies with the intention of fully understanding the material but adopted more surface strategies as their workload increased (Lietz & Matthews, 2010).

Andrews, Garrison, and Magnusson (1996) conducted a multiphase, mixed methods study to test the relationship between higher education instructors' approaches to learning and students' approaches to learning. Initially, they developed a profile of excellent teaching in higher education by interviewing professors in the Faculty of Education who were identified by

their peers as being excellent teachers. Through conducting semi-structured interviews, they identified common themes that were assembled into a profile of excellent teachers; these profiles were then validated by four different faculty members. Data suggested that excellent teaching is characterized by making learning meaningful to the students, engaging in self-reflection, being prepared and organized, participating in ongoing learning, fostering respectful professor – student relationships, clarifying roles and responsibilities, being available, focusing on concepts and ideas, encouraging students to think independently, fostering excitement in the learning, and having honesty, integrity, and genuineness in their teaching (Andrews et al., 1996).

In a subsequent phase of the study, Andrews and colleagues (1996) identified four professors who embodied excellent teaching and surveyed their students to determine whether they used deep or surface approaches to learning. The Study Process Questionnaire (Biggs, 1987) was administered to 271 first-year students and 103 third-year students in the faculties of science and social sciences. In general, the first-year students scored higher on the surface approach to learning, whereas the third-year students scored higher on the deep approach to learning. The researchers speculated that the difference in approach could be due to developmental differences between the two groups (Andrews et al., 1996).

During the final phase of the study, the researchers compared the professors' approaches to teaching with their students' responses to the Study Process Questionnaire. Twenty first-year and 20 third-year students were interviewed. Results indicated that the instructors wanted their students to take a deep approach to learning; however, that did not consistently result in the students doing so. This finding indicated that there are more factors that affect students' approaches to learning than the instructor's teaching approach (Andrews et al, 1996).

Using a quantitative approach, Wilson and Fowler (2005) investigated whether students' approaches to learning were influenced by course design. The study involved 50 third-year science students enrolled in two concurrent courses: one a traditional lecture course and the second a course designed to promote action learning. The researchers administered the Study Process Questionnaire (Biggs, 1987) at two different points in time to determine students' approaches to learning. They administered it in the first week of the semester, asking students to indicate their typical approach to learning. They administered it again twice at the end of the semester, one week apart in both the traditional course and the action learning course. This time, the researchers asked the students to answer the questions based on their approach to learning within that course. The researchers found that some students who took a surface approach to learning changed to a deep approach when the learning environment was designed to include peer learning groups with project-based assignments. They noted that the effect was significant, but modest; in other words, many of the learners who used a surface approach did not change to a deep approach though the learning environment had changed (Wilson & Fowler, 2005). The study supported the idea that a student's learning approach could change, but encouraging learners to take a deep approach was challenging and would not occur automatically as a result of changes to the course.

Research on the learning environment and approach to learning appears to be inconsistent. In their study of learning environments and student learning strategies, Nijhuis et al. (2005) administered the Study Process Questionnaire (Biggs, 1987) to a total of 312 second-year business students at two points in time: in an assignment-based course and the next semester in a problem-based course (n = 312). The researchers found that changing the learning environment from a more traditional, assignment-based class to a problem-based learning course had the

opposite effect from what was intended. Instead of a higher percentage of students adopting a deep approach to learning, they found that more students adopted a surface approach. They speculated that there could be several reasons for the finding, such as insufficient communication around the rationale for changes, the need for more assistance and tutoring for students as they made the change to an unfamiliar course structure, insufficient student feedback throughout the process, and insufficient communication around student assessment (Nijhuis et al., 2005). The research suggested that learning approach was the result of many interrelated factors and not a simple cause-effect equation.

Student assessment and learning approach.

The literature suggested that student assessment was one of the major drivers of learning approach (Scouller, 1998; Groves, 2005; Trigwell & Prosser, 1991). According to the deep and surface approach model, assessment methods that tested students on rote memorization and discrete factual knowledge were believed to promote a surface approach to learning, while assessment methods that required conceptual thinking and making connections were more likely to encourage a deep approach to learning (Biggs & Tang, 2011). Marton and Saljo (1976b) explained the link between student assessment and approach to learning:

> Students adopt an approach determined by their expectations of what is required of them. While many students are apparently capable of using ‘deep’ or ‘surface’ strategies, it may be that the current demands of the examination system at the school level are interpreted by them as requiring mainly the recall of factual information to the detriment of a deeper level of understanding. The present investigation suggest[s] that students may need to refocus their attention on the underlying meaning of what they are required to study and

> that this process could be helped by ensuring that the assessment procedures demand deep-level processing (p. 125).

Scouller's (1998) quantitative study of 206 second-year Education students compared student perceptions of multiple-choice exams with those of assignment essays. The use of multiple-choice question exams increased surface learning approaches in students, possibly because students perceived them as testing lower-level thinking skills such as memorization. Students who preferred the assignment essay tended to favor a deep approach to learning, while students who preferred multiple choice exams tended to favor a surface approach (Scouller, 1998). Andrews and colleagues (1996) noted that even though professors in their study wanted to encourage a deep approach to learning, many of their first-year students used a surface approach. One possible reason for the finding was that these students were assessed with multiple-choice exams (Andrews et al., 1996).

Research is not consistent on this finding though. In a qualitative study of 19 undergraduate students in a sociology course, Prosser and Webb (1994) interviewed participants on their approach to writing an essay. The researchers found that some students adopted a surface approach to their essay writing. Additionally, the students who used a surface approach tended to perform poorer than students who used a deep approach in their essay writing (Prosser & Webb, 1994). Baeten, Dochy and Struyven's (2008) quantitative study of 138 first-year business students looked at approach to learning and student assessment preferences. Researchers surveyed students using the revised Study Process Questionnaire (Biggs, 2001) and the Assessment Preferences Inventory (Birenbaum, 1994). Results of the study showed that students' use of a surface approach to learning increased with the use of portfolio assessment, while the use of a deep approach stayed the same. The authors speculated that the heavy student

workload associated with the portfolios led to an increase in surface strategies. In a quantitative study of 77 first-year medical students, Groves (2005) examined learning approach in a course that was structured around problem-based learning. Two instruments were administered: the Study Process Questionnaire (Biggs, 1987) and the Diagnostic Thinking Inventory (Bordage, Grant, & Marsden, 1990). The researcher reported that students increased in the use of a surface approach and decreased in deep approach over the three years of the study. The author questioned whether the heavy workload associated with the health sciences was a greater determining factor than problem-based learning activities.

Previous studies supported the idea that it was easier to encourage a surface approach in learners than a deep one (Baeten, Dochy & Struyven, 2008; Gijbels et al., 2009). Given that the research did not consistently support the link between student assessment method and learning approach, it might be reasonable to assume that there were many complex factors that influenced learning approach rather than direct correlations (Kember & And, 1996). For example, in Kember's and And's (1996) mixed methods study of 174 mechanical engineering students, approach to learning appeared to be affected by workload, perceived workload, time spent in class, and amount of study time.

Learning approach and faculty development.

Although we typically think of deep and surface approaches in terms of student learning, they appear to be critical for faculty members as well. Most instructors have not had any formal training in education; the professional development programs they take through their teaching support unit are the only training that some of them receive (Gillespie & Robertson, 2010). Given that the majority of the research indicated that a deep approach to learning resulted in higher levels of critical thinking and longer retention than a surface approach, we want to foster

deep learning approaches in these programs to maximize learning opportunities. My study will examine the ways in which participants take a deep approach to learning, and the ways in which they take a surface approach to learning tasks. This information will help to inform practice for educational developers.

Learning Community

The term learning community has been defined in several slightly different ways. In the study, I will be using Conrad's (2005) definition of a learning community: a group of people who have "a general sense of connection, belonging, and comfort that develops over time among members of a group who share purpose or commitment to a common goal" (p. 2).

In his study, Rovai (2002) developed an instrument called the Classroom Community Scale to measure students' perceptions of community in an online course. He developed the initial instrument of 40 items by reviewing the literature to identify characteristics of classroom community in online courses. Characteristics included feelings of connectedness, cohesion, spirit, trust, and interdependence among members (Rovai, 2002). He gave a group of three experts in educational psychology the initial set of questions for review. Each person rated the questions of a scale from 0 (totally not relevant) to 4 (totally relevant). Questions that did not receive a rate of four from each reviewer were removed from the survey. After revisions, there were 20 survey questions left, ten relating to feelings of connectedness and ten to "feelings regarding the use of interaction within the community to construct understanding and the extent to which learning goals are being satisfied within the classroom setting" (Rovai, 2002, p. 202).

Next the survey was given to participants. There were 375 participants in the study, all of whom were graduate students taking courses in leadership and education. The researcher did not attempt to control the design or implementation of the courses; instructional strategies were left

to individual instructors. The researcher used factor analysis to establish the validity and reliability of the instrument. Results of the study indicated that the Classroom Community Scale is a valid measure of classroom community for graduate students in an online course (Rovai, 2002).

Online learning community.

Online learning communities are similar to face-to-face learning communities in that the participants share common interests, provide peer support and share expertise, but they use the online environment to interact (Daniel, Schwier, & Ross, 2007). Daniel et al. (2007) conducted a study on the learning process that occurred in a graduate-level university course by examining the asynchronous communication in the course. Data used in the study consisted of the discussion board posts written by participants in two cohorts of an eight-month Master's level course at a Canadian university. There were 23 participants in the study, who were required to post to the discussion board every week. Grounded theory was used to guide the content analysis techniques, and codes were generated from the meaning of the text (Daniel et al., 2007).

Results of the study showed that participants tended to demonstrate two learning processes: intentional and incidental learning (Daniel et al., 2007). Intentional learning was related to course requirements such as readings and assignments, and based on course outcomes. Aspects of intentional learning included "explicit information, evaluation, elaboration, inquiry, argumentation, uncertainty, suggestion, clarification, summation, and feedback" (Daniel et al., 2007, p. 467). Incidental learning was not related to learning outcomes for the course. Incidental learning variables included "shared understanding, shared experience, observation, reflection, peer support, sociability, and disagreement" (Daniel et al., 2007, p. 467).

Daniel et al. (2007) asserted that the results of the study indicated that both intentional and incidental learning add to community building and learning processes in a course. By far the biggest variable in terms of frequency of occurrence in the transcripts was an aspect of incidental learning, sociability. The researchers suggested that, while sociability does not ensure that learning will occur, it builds community which therefore promotes a positive learning environment (Daniel et al., 2007). They concluded that the online learning community enabled students to achieve learning beyond the course requirements (Daniel, et al., 2007).

Peer Learning

Group work.

Working well as part of a group is not only an essential skill in today's workforce, team projects are increasingly being used in higher education classrooms. While group work is a general term that includes both informal learning tasks and projects in which students are assessed on their work, the term team projects refers to formal assignments that students complete for grades (Hassanien, 2007).

In a qualitative study, Hassanien (2007) conducted three focus groups with six to nine participants per group. Students were in either tourism or the leisure and hospitality field, with considerable experience with group work in higher education. The researcher asked participants their thoughts on how group work benefitted their learning, and the challenges it posed. Advantages of working in a group reported by participants were numerous, including enhanced communication skills, better understanding and longer retention of content, challenging students to use critical thinking skills, increased motivation, strengthening social and interpersonal skills, and the opportunity to exchange knowledge and perspectives with peers (Hassanien, 2007). Participants also reported several challenges with working in groups, including problems with

poor communication amongst group members, poor attendance, unequal workload, different grade expectations, cultural differences, time consuming nature of team projects, and some students willing to let others do the majority of the work (Hassanien, 2007).

Other research supported Hassanien's (2007) findings. In his literature review of team projects, Hansen (2006) reported that team projects offered numerous benefits, including increased comprehension and retention of information over traditional lecture methods, increased student motivation and achievement, increased development of critical thinking skills, and stronger social skills. Challenges of working in groups included difficulties scheduling time to meet and work, students who allowed others to do the majority of the work, and students who preferred to work alone (Hansen, 2006).

Mentoring.

Peer learning is an important part of learning communities. It can take the form of peer support, feedback, or mentoring. According to Vaill and Testori (2012), such peer learning can result in increased motivation, achievement, and satisfaction with a faculty development initiative. In their program designed to prepare faculty for teaching online, they took advantage of peer learning to provide such benefits for learners. Faculty interacted on an online discussion board, conversed in the face-to-face classroom, and after the conclusion of the program, they were paired up with an experienced online educator for one-on-one mentoring (Vaill & Testori, 2012). Mentors worked with novice online instructors to help them structure their online course effectively, share experiences of what worked well for them in the past, answer questions, and provide strategies. The mentoring program was effective in enhancing participants' understanding of effective online course design. Mentors benefitted from the program in that

they were prompted to take a more reflective approach to their online teaching (Vaill & Testori, 2012).

Peer partnerships.

The peer partnership model of faculty development acknowledges that peer review of teaching can be perceived as judgmental and summative (Chester, 2012). Peer partnerships, on the other hand, consist of pairs of faculty members who take turns acting as observer and observed. Participants are on an equal footing with one another, building a collegial relationship over time (Chester, 2012).

The reciprocal model of peer partnerships used in a study at an Australian university allowed participants to derive benefits from receiving feedback and observing teaching techniques used by their partners (Chester, 2012). An action research method was used in the study that included 35 participants, all academic staff in higher education. Participants were paired up with another faculty member, typically from a different faculty and often with someone who was at a different point in their career. An evaluation survey was given near the end of the program, with Likert-scale and open-ended questions. Focus groups were also conducted (Chester, 2012).

Results of the study showed that participants benefitted from receiving feedback as well as observing their partner's teaching. Positive outcomes included gaining new ideas and strategies, increased confidence in teaching, increased levels of reflection on teaching practices, and enhanced relationships with colleagues across disciplines (Chester, 2012).

Online professional learning community.

An online professional learning community is a group of learners with a common learning goal that interacts regularly online to further their understanding. As a relatively new

model of professional development, it opens up possibilities for blended and fully online professional development offerings. The asynchronous nature of much of the learning allows participants to access materials and ongoing discussions according to their own schedule. However, it takes careful planning in order to have impactful professional development. Lock (2006) conducted a literature review on online teaching professional development communities to examine how such communities can be structured to support professional growth. According to Lock (2006), "it is about thinking differently about professional development using a community model approach where technology provides new spaces to facilitate learning and collaborative inquiry, designed to enhance teaching and learning" (p. 675). It is not enough to simply create a space. Planning must address inquiry, community, collaboration, learning, and technology. If not, the learning opportunity may fall short. This finding is critical to my study because it highlights the importance of the design of the online learning activities. If the online discussions and activities do not take inquiry, collaboration, and learning into account, there is a lower chance of them being relevant and useful to participants' professional context.

In their study, Gray and Smyth (2012) used a quantitative approach to investigate the efficacy of the discussion forums in facilitating an online professional learning community in higher education. They tracked 182 registered users, including faculty and staff, across two different institutions in the United Kingdom. The researchers found that the online discussion board had a core of regular users, while the majority of people did not contribute regularly. This, in turn, limited the dialogue in the forums. The people who contributed said they appreciated keeping in touch with what others were doing and furthering their understanding of relevant issues. The study is interesting because it points to the notion that participants use the online discussion forums for a variety of reasons that relate to their personal learning goals.

Community of Inquiry Model

The Community of Inquiry framework, proposed by Garrison, Anderson, & Archer (2000), provides a way of looking at the process of learning where a group of people are working collaboratively toward an educational goal using an inquiry-based process (Garrison & Vaughan, 2008). The Community of Inquiry framework has its roots in John Dewey's work; the role of community in learning was central in Dewey's belief (Swan, Garrison & Richardson, 2009). The Community of Inquiry model "was developed to explore how online communication and discourse can facilitate higher order thinking skills" (Vaughan & Garrison, 2006, p. 142). A central idea of the Community of Inquiry model is that higher order learning is facilitated by a community of learners who are engaged in critical reflection and discourse.

The Community of Inquiry model is based on three interconnected elements that are a part of an educational experience: teaching presence, social presence, and cognitive presence. The interaction of these three elements comes together to support an effective learning environment (Garrison, Anderson, & Archer, 2000). The framework suggests that cognitive presence, or practical inquiry, was supported by teaching and social presences (Garrison, Anderson, & Archer, 2001). In the sections that follow, each of the three presences is discussed with more detail.

Teaching presence.

In order for a community of inquiry to be established and sustained, teaching presence is required. Teaching presence is defined as the "design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educational worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001, p. 5). Teaching presence is categorized into two functions: the design and the function of the educational experience. Prior

to instruction, design decisions are made around defining the learning outcomes, establishing the curriculum, structuring learning activities, and so on. The second phase of teaching presence is monitoring and facilitating the community to encourage learners to reach the intended learning outcomes. Activities at this stage included encouraging participation, monitoring learning, addressing misconceptions, providing direction, and offering feedback (Garrison et al., 2000). Teaching presence was found to be critical to the online experience. Garrison et al. (2010) stated that a strong teaching presence in an online course helped to move students through the entire practical inquiry model, not just the initial phases.

Social presence.

Social presence is defined as "the ability of learners to project their personal characteristics into the community of inquiry, thereby presenting themselves to the other participants as "real people" " (Garrison et al., 2000, p. 89). Social presence is important in an online learning community because non-visual cues such as facial expression and body language, that people relied on heavily in face-to-face communication, are not usually present. Social presence has three categories: affective, open communication, and group cohesion. Affective messages included expressions of emotion, relating personal details, and using humor. Open communication included indicators such as quoting from other people's posts, complimenting others, and agreeing with them. Group cohesion included greetings, using people's names, and using terms such as 'us' to indicate being part of a group (Garrison et al., 2000).

Social presence is especially critical at the beginning of a community of inquiry in order for learners to feel comfortable and have a sense of belonging. However, social presence alone does not result in a valuable learning experience. According to Garrison and Vaughan (2008), "higher levels of learning inevitably require purposeful discourse to collaboratively construct,

critically reflect, and confirm understanding. This is what is referred to as cognitive presence" (p. 21).

Cognitive presence.

Cognitive presence is defined as the way in which participants are able to "construct meaning through sustained communication" (Garrison et al., 2000, p. 89) and is therefore an essential element for learning in a community of inquiry. The practical inquiry model outlines characteristics of cognitive presence.

Practical inquiry model.

The Practical Inquiry Model (Garrison et al., 2000) offers a detailed account of the process of cognitive presence and was designed to assess critical discourse in online discussions. This model had four phases: triggering event, exploration, integration, and resolution/application (Garrison, Anderson, & Archer, 2001).

The first phase, triggering event, occurs when an issue or problem emerges which stimulates learners' curiosity. Indicators of the triggering event phase are recognizing a problem and a sense of puzzlement. Examples included asking questions about an issue or taking a problem in a new direction (Garrison et al., 2001).

Exploration, the second phase, involves the search for relevant information pertaining to the issue or problem. Learners grapple with the nature of the problem, trying to make sense of it. Exploration includes group activities, such as brainstorming, or individual ones, such as information searches. Indicators of this phase include presenting many different ideas within a single online post, information exchange, suggestions for consideration, unsupported opinions, and extending other people's ideas (Garrison et al., 2001).

Integration, the third phase, involves connecting and synthesizing information to make sense of the issue. Indicators of the integration phase include connecting information from more than one source, such as readings and personal experience, and suggesting solutions to the issue (Garrison et al., 2001).

In the final phase, resolution, various solutions are tested and defended in order to resolve the issue or problem. This phase is characterized by trying out solutions, discussion around how problems were solved, and defending solutions (Garrison et al., 2001).

The Community of Inquiry model provides an interesting framework for my research for several reasons. It emphasizes the role of the community in the learning process. It is also well developed with a solid research base. Additionally, the practical inquiry model offers guidance in terms of coding the transcripts.

I used the presences of the CoI model to think about how the learning community affected participants' approaches to learning in the workshop. The Venn diagram with overlapping social, teaching, and cognitive presences offered a structure with which to make sense of the results of the study. I also used the practical inquiry model coding protocol to code the online discussion transcripts. The results of my study add to the growing understanding of the Community of Inquiry model by applying it in a blended context and relating themes from deep and surface approaches to learning to the model.

Community of Inquiry and Faculty Development

The CoI framework has been used in previous research on blended faculty development. Vaughan (2004) used it as the framework to examine how a blended format could support the inquiry process of a faculty learning community. According to the findings from this research, when the Community of Inquiry model was applied to faculty development, the three presences

were reconceptualized for the study's specific context. Social presence was "the ability of the community to support and sustain inquiry" (Vaughan, 2010, p. 61). Cognitive presence focused on "an inquiry into teaching practice", while teaching presence afforded opportunities for blended support (Vaughan, 2010, p. 61). The terms are more narrowly defined than the original framework. Vaughan's (2010) revised Community of Inquiry framework is presented in Figure 2.1.

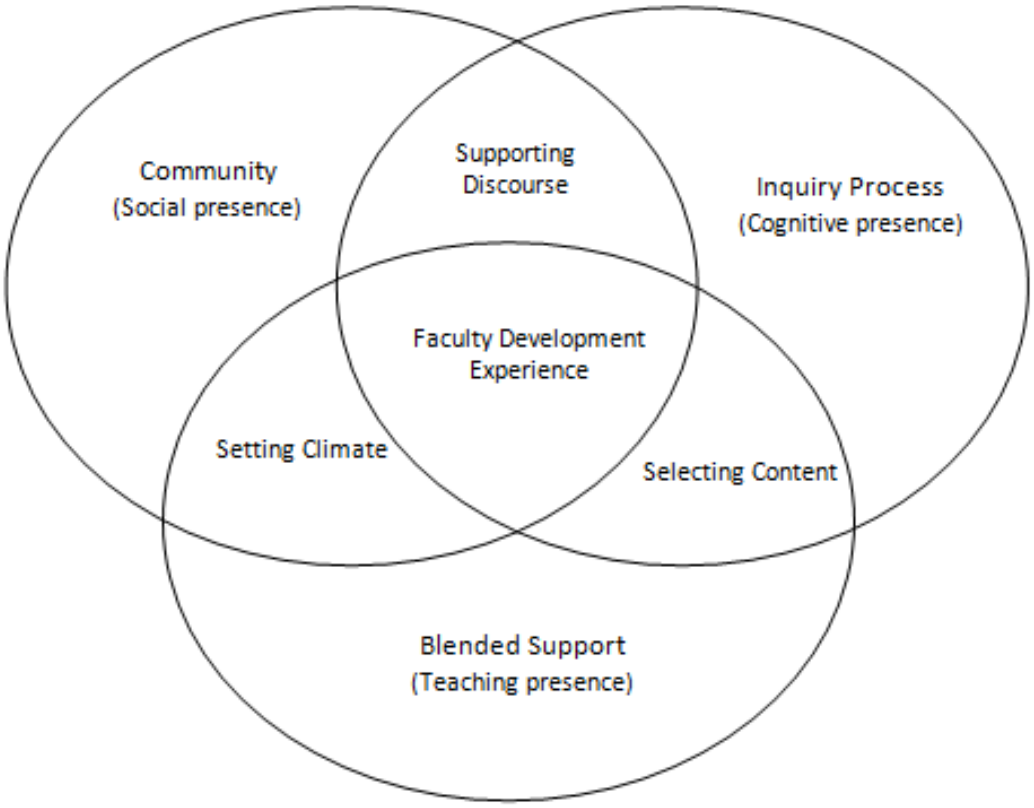

Figure 2.1: Blended faculty Community of Inquiry – presences
(Vaughan, 2010; adapted from Garrison et al., 2000). Used with permission.

Vaughan's (2010) adaptation of the Community of Inquiry model relates to my study in that they both address faculty development in a blended format. While I did not use Vaughan's (2010) revised Community of Inquiry model in my study, I examined his conceptualization of

the three presences, how they differed from the original model, and how they related to my data. For example, in Garrison et al.'s model (2000), teaching presence can be assumed by learners as well as the instructor. Vaughan (2010) expanded on this slightly by reframing teaching presence as blended support. Vaughan's (2010) adaptation of cognitive presence was "an inquiry into teaching practice" whereas social presence was "the ability of the community to support and sustain this inquiry" (p. 61). These definitions helped me to consider the presences within my own research context.

Learning Community and Approach to Learning

To date, there have been few studies examining the effect of the learning community on approach to learning. Lau, Liem, and Nie (2008) conducted a quantitative study of 1,476 grade nine students in Singapore examining the role of the learning community on approach to learning. The participants in their study were quite different from the participants in my study in that my participants were adults, and Lau et al.'s (2008) study participants were in grade nine. Nevertheless, the study examined learning community and approach to learning. Lau et al. (2008) found that group participation was positively related to a deep approach to learning. The authors speculated that group work encouraged a deep approach by requiring students to organize their ideas in order to explain them to others, affording them a better grasp of the learning task (Lau et al., 2008).

Klinger (2006) used a mixed methods research design to examine asynchronous communication in an introductory psychology course to see how the collaborative online learning environment had an effect on student learning approach. The researcher surveyed the students and analyzed transcripts from the online discussion board. He found that transcripts from the online forums indicated a deeper approach to learning than the students' self reports,

which indicated no change in learning approach. He suggested that the instructor may need to make learning demands such as critical thinking and active participation overt in a course in order to change student perceptions (Klinger, 2006).

My study will examine the role of learning community on approach to learning, focusing on a blended faculty development workshop, in order to help address the gap in the literature.

The need for further research.

Research is needed on the effects of community on deep and surface learning approaches. Such research is essential if we are to understand how to offer programs that are of long-term benefit to participants, leading to lasting change. There are a few studies, however, that shed some light on this issue. Cuneo and Harnish (2002) examined deep and surface learning approaches in regard to the use of online discussion boards within a course context. This research is a bit dated considering the rapid pace of development in online education; also, the participants in this study were undergraduate students who were taking an online course and not instructors taking professional development. Their longitudinal, quantitative study had 1073 participants over three years. The results of the study showed that a deep approach to learning was associated with more active use of online communication tools such as a discussion board and with placing more value on learning activities that encouraged interaction. Surface learning was associated with less frequent use of online communication tools and placing less value on these types of activities (Cuneo & Harnish, 2002).

Offir, Lev, and Bezalel (2008) conducted a mixed methods study with 59 participants in an introductory computer science course, using surveys, interviews, and observations for data collection. The researchers found that students who demonstrated aspects of deep learning processes in the survey, interview, and/or observation data could mitigate the lack of

synchronous communication found in some online courses. The finding was consistent with the idea that learning is more relevant and effective when students are active in the learning process. Mimirinis and Bhattacharya (2007) stated that, while online technologies could enable communication and collaboration, the design of the learning environment had a large impact on whether or not students took a deep or surface approach to learning. Cleveland-Innes and Emes (2005) used a quasi-experimental research design to study interaction and its effect on approach to learning. The researchers examined two sections of the same course, giving the Study Process Questionnaire (Biggs, 1987) to 64 students at two points in time. According to the researchers, both peer and instructor interaction affected an individual's approach to learning over time (Cleveland-Innes and Emes, 2005).

The question is, then, in what ways can a learning community, both online and face-to-face, promote a deep approach to learning for participants in a blended format workshop? The results of my research will add to our body of knowledge of designing faculty development programs, especially blended format offerings. Results will be of interest to educational developers at the Teaching & Learning Centre at the University of Calgary, as well as other educational development centres in higher education institutions nationally and internationally. Instructional designers, faculty development instructors, and curriculum designers will all be able to use the results of the study.

Literature Review Summary

Much of the literature around deep and surface approaches to learning suggested that a deep approach was preferable to a surface or achieving approach to learning. The literature also indicated that approach to learning was not fixed within an individual but was influenced by a variety of personal and contextual factors; it appeared to be easier to encourage learners to adopt

a surface approach to learning than it was to encourage them to take a deep approach. Since approach to learning can be influenced by external factors, one question worthy of consideration is how a faculty learning community can affect a participant's approach to learning.

The Community of Inquiry model provides a framework for examining how a group of learners can work collaboratively towards a common educational goal. Teaching, social, and cognitive presences are all a critical part of the overall educational experience. The Community of Inquiry model has been used before to explore how it could support a blended format professional development program (Vaughan, 2004).

My research study will help to inform how the face-to-face and online learning communities influence approach to learning for participants in a blended format professional development workshop in higher education. In Chapter Three, I will describe in detail the research methodology used for the study.

CHAPTER THREE: METHODOLOGY

Case Study

The research was conducted as a case study, using mixed methods procedures. According to Gall, Gall, and Borg (2007), case study can be defined as "the in-depth study of instances of a phenomenon in its natural context and from the perspective of the participants involved in the phenomenon" (p. 634). An important aspect of case study research is setting the boundaries to be studied; the case is bound by the phenomena, the participants, and time. Yin (2009) described a case study as "an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 18). This study possesses the following characteristics of case study research:

- Particularistic: It focused on a particular situation, event, program, or phenomenon. In this study, the particular program is a blended faculty development workshop for faculty members and graduate students on course design. The particularistic nature of case study research makes it a good choice for practical problems, which can in turn shed light on similar problems or phenomena (Merriam, 1998, p. 29).
- Descriptive: "Thick description," or a detailed description of the event or entity, is used to portray the phenomenon and analyze situations. The case may be examined over time, and often presented in a qualitative manner. Case study research is particularly strong at showing the complexities of a situation (Merriam, 1998, p. 30). Therefore, the descriptive nature of case study research was appropriate for my study as I was interested in knowing how the online and face-to-face learning communities impacted on participants' approaches to learning.

- Heuristic: The study helps to promote the reader's understanding of the case, including what happened and why. Because the case study can summarize, evaluate, and conclude, the reader decides whether or not to apply this information to his or her own situation (Merriam, 1998). The heuristic nature of case study research is appropriate for my study, since it includes enough detail that readers can compare to their own context and decide if and how they are comparable.

Both qualitative and quantitative data were collected in this mixed methods study.

Mixed Methods Approach

Mixed methods research includes studies in which quantitative and qualitative methodologies are used in a single investigation" (Gall, Gall, & Borg, 2007). The researcher can thereby capitalize on the strengths of each method while mitigating inherent weaknesses by using other methods.

The following section outlines the strengths and weaknesses of quantitative, qualitative, and mixed methods approaches to research.

Strengths and weaknesses of a quantitative approach.

There are many reasons why researchers choose quantitative methods, as they have much to offer. One of the major reasons cited for using a quantitative approach is that the results of the study can be generalized to a larger population if the study uses a large enough and representative sample size. Other reasons include: research results include precise numerical data, and the possibility of making predictions based on the quantitative data, the potential for analyzing cause and effect relationships. Additionally, quantitative data can often be collected relatively quickly, can collect data from a large number of people, and the findings of such a

study may be more influential with administrators and others who make educational decisions (Johnson & Onwuegbuzie, 2004).

Researchers using a quantitative approach must be aware of its drawbacks though. Categories used in the questions may not include participants' responses, which would weaken the data. Quantitative research can also be subject to confirmation bias, in which the researcher focuses on collecting or interpreting data that supports or confirms a theory, rather than data aimed at generating hypotheses. An additional weakness of a quantitative approach is that the results of the research could be too general to be useful for application to specific contexts and groups of people (Johnson & Onwuegbuzie, 2004).

Strengths and weaknesses of a qualitative approach.

Qualitative methods offer many benefits as well. They allow researchers to study a small number of participants or cases in greater depth than quantitative research. The resulting data can have richness, using participants' own words and meaning. Qualitative research can be used to study processes, patterns, and change. Phenomena can be studied in their natural setting. Since data are often collected over a length of time, the study's focus can shift to more accurately reflect what is important about a phenomenon. If the researcher is conducting a case study, the resulting report can be very descriptive and persuasive for readers (Johnson & Onwuegbuzie, 2004).

Qualitative research is not without its weaknesses though. It is often criticized for not being generalizeable to other people or contexts. For this reason, it may not be as influential with administrators. Data collection can take an extended period of time, and data analysis is often time-consuming. It is more difficult to make predictions using qualitative research and to test hypotheses and theories than it is with quantitative research. Also, the results of the study may be

influenced by the researcher's biases to a greater extent than quantitative research (Johnson & Onwuegbuzie, 2004).

Strengths and weaknesses of a mixed methods approach.

Using a mixed methods approach allows the researcher to make the most of the strengths of each method while mitigating its weaknesses through different methods of data collection. For example, the lack of generalizability of a qualitative approach can be addressed through collection of quantitative data, while the lack of richness in a quantitative study can be compensated for through qualitative methods. Therefore, a mixed methods approach "can result in well-validated and substantial findings" (Creswell, 2003, p. 217). Using a concurrent mixed methods approach can also allow the researcher to confirm or corroborate findings within a study. When used in this manner, qualitative and quantitative data are both used to support the findings of the study (Greene, Caracelli, & Graham, 1989).

Specific strengths of a mixed methods approach are that words, images, and narrative data can be used in combination with numerical data to provide meaning. The researcher can thereby address broader research questions using a mixed methods approach and potentially answer the questions in a more robust manner. This in turn may provide more complete findings that can inform decision-making. The researcher can use the strengths of each research method at the design stage to mitigate weaknesses inherent in specific methods. Data can also be used for triangulation, with different research methods supporting the findings of the other. Using both qualitative and quantitative methods can also provide data that may not have been uncovered if only one method were used. A mixed methods approach has the potential to increase generalizability of the research results. Additionally, qualitative and quantitative methods can be implemented sequentially to strengthen the study design. For example, a survey can be

conducted, and from the results, the researcher can design interview questions that investigate interesting aspects that emerged from survey data (Johnson & Onwuegbuzie, 2004).

There are also challenges to using a mixed methods approach. It requires the researcher to be competent in both qualitative and quantitative research, including analyzing the results. Comparing qualitative and quantitative results can also be challenging. Additionally, the researcher may have difficulty reconciling contradictory findings from the two different data types (Creswell, 2003; Johnson & Onwuegbuzie, 2004). Other challenges are that a mixed methods approach may be more expensive and time-consuming and that "methodological purists" may insist that researchers use either a quantitative or qualitative approach only and reject the results of a mixed methods study (Johnson & Onwuegbuzie, 2004, p. 21).

Rationale for selecting a mixed methods approach.

There are several reasons why a researcher might choose a mixed methods approach in a study. The most important reason is that a mixed methods approach can be the best way in which to answer the research questions (Johnson & Onwuegbuzie, 2004). I used mixed methods for two reasons: triangulation and complementarity of data (Green et al., 1989).

Triangulation was used to confirm or support results from different data sources and therefore increased the validity of the study. I used quantitative data to confirm some qualitative findings. For example, qualitative data indicated that participants generally took a deep approach to learning in the workshop. I used quantitative data to confirm this finding. However, triangulation was the secondary purpose for a mixed methods approach to the study. Complementarity was the primary reason that a mixed methods approach was used.

The purpose of complementarity is "to increase the interpretability, meaningfulness, and validity of constructs and inquiry results by both capitalizing on inherent method strengths and

counteracting inherent biases in methods and other sources" (Greene et al., 1989, p. 259). Both qualitative and quantitative methods were used in my study, offering different types of data to inform the study's findings, enhancing richness and detail.

Implementation of the mixed methods approach.

Qualitative and quantitative data were collected concurrently. The pre and post survey data were collected during the workshop. Surveys included both Likert scale and open-ended questions. Observations occurred during the workshop as well. After the workshop, qualitative data were gathered in the form of interviews and discussion board posts.

Qualitative data had a higher priority in the research than quantitative data. Since a relatively low number of participants completed the surveys (n = 34), I was only able to do descriptive statistics and some cross-tabulations. More robust quantitative analyses were not possible given the number of respondents. Therefore, the qualitative data figured more prominently in the study (Creswell, 2003). More importantly, the qualitative data were more helpful in informing the research questions as they were investigating complex social phenomena. The quantitative data were used to triangulate the findings from the qualitative data.

To overcome the challenges of implementing a mixed methods approach, I got assistance with the quantitative software used in the study. I paid a research assistant to enter quantitative data and run the statistical analysis. I then analyzed the results. I also paid a research assistant to transcribe the interview tapes, which I then checked for accuracy. This saved me quite a bit of time, which I could then spend on other research tasks. Although methodological purists would argue that qualitative and quantitative methods cannot be mixed, I would counter the argument by stating that mixed methods are necessary if they provide the best means to answer the research questions.

A number of data sources were used in order to better understand the role of community in deep and surface approaches to learning. Quantitative data included two surveys. The first was used to gather demographic information and to determine the extent to which participants took a deep or surface approach to learning tasks. The second survey elicited the extent to which social, cognitive, and teaching presences were apparent. Interviews, observation, and documents were used to gather qualitative data. In a subsequent section, the rationale for each method of data collection is described.

Research Context: Description of the Workshop

The research study examined the role of community in participants' approach to learning in a blended professional development seminar in higher education. The seminar, the Course Design Workshop, was offered to faculty members and graduate students who were designing a higher education course. Participants registered for the workshop on a voluntary basis and throughout the workshop designed or redesigned a course that they would subsequently teach. It should be noted that although some of the participants were graduate students, most were either the instructor of record for a particular course or were in a Teaching Assistant role. The workshop was offered one day per week for three consecutive weeks, with online activities such as asynchronous discussions taking place in a course management system, Blackboard™, between the face-to-face sessions. The overall goal of the workshop was to design or redesign a course using a systematic approach and guided by instructional design principles. Participants were eligible to receive a Certificate of Completion after designing their course and holding a follow-up consultation with an Instructional Designer. Table 3.1 lists the learning outcomes for each session of the workshop.

Table 3.1. Learning Outcomes for the Course Design Workshop

Session	Learning Outcomes
Day 1 Face-to-Face	Participants will: • Conduct a learner analysis in order to identify important elements in their course design. • Write effective learning outcomes for their course.
Week 1 Online	Participants will: • Conduct a context analysis in order to identify important elements in their course design. • Write effective learning outcomes for their course. • Select and sequence the content for their course.
Day 2 Face-to-Face	Participants will: • Choose student assessment strategies that are an accurate measure of their learning outcomes. • Select teaching and learning activities in alignment with learning outcomes and assessments.
Week 2 Online	Participants will: • Create a course plan with alignment between course outcomes, teaching and learning activities, and student assessments.
Day 3 Face-to-Face	Participants will: • Evaluate their course design based on identified criteria. • Generate a course evaluation strategy.

(Teaching & Learning Centre, 2012)

The Course Design Workshop was further structured into session topics, with presentations given by the facilitators on a specific subject, small and large group discussions about important concepts, and time for participants to work on their individual plans. Table 3.2 lists the topics and activities for each session.

Table 3.2. Schedule of Topics and Activities for the Course Design Workshop

Session	Topics	Activities
Day 1 Face-to-Face	ADDIE Model Learner Analysis Context Analysis Course Outcomes	Conduct a learner analysis Discuss factors of a context analysis Participants draft three course outcomes for their own course
Week 1 Online	Learner Analysis Context Analysis Content Analysis	Participants conduct a learner, context, and content analysis for their course Participants revise their course outcomes Participants view and comment on other people's learner, context, and content analyses
Day 2 Face-to-Face	Student Assessment Teaching and Learning Activities Aligning Course Elements	Participants construct a student assessment plan and identify teaching and learning activities in alignment with their course outcomes
Week 2 Online	Course Outcomes Course Plan	Participants post their course plan. They view and comment on other people's plans, and revise their own
Day 3 Face-to-Face	Course Evaluation Special Topics	Participants create a course evaluation plan Participants discuss special topics based on interest

(Teaching & Learning Centre, 2012)

Research Questions

The intent of the study was to investigate the following research questions:

1. In what ways do workshop participants take a deep approach to learning in a blended faculty development workshop?
2. In what ways do workshop participants take a surface approach to learning in a blended faculty development workshop?
3. How does the role of the face-to-face learning community affect the approach that participants take to the workshop?

4. How does the role of the online learning community affect the approach that participants take to the workshop?
5. What is the relationship between the Community of Inquiry model and the effects of the learning communities on learning approach taken by participants in the workshop?

Methods of Data Collection

In order to answer the research questions, four data gathering techniques were used, including a pre- and post-workshop survey, participant interviews at two different points in time, observation, and online discussions. Ethics review certification was received from the University of Calgary prior to conducting the study and all participants signed an ethics consent form prior to engaging in the study.

Surveys.

Two surveys, pre- and post-workshop, were implemented in paper format. The pre-workshop survey (Appendix A) was administered on the first morning of the workshop. It included demographic questions and a modification of the Study Process Questionnaire, an instrument used to measure learning approaches within three categories: deep, surface, and strategic (Biggs, 1987). Some of the Study Process Questionnaire questions remained the same; however, certain questions did not apply to the context of the workshop and were not included in the survey. Forty-two participants completed the pre-workshop survey.

The second survey was administered at the end of the workshop. It included the Community of Inquiry Survey (Arbaugh et al., 2008) and the Classroom Community Scale (Rovai, 2002), as well as three open-ended questions (Appendix B). The Community of Inquiry Survey asked participants questions about the workshop in relation to teaching, social, and cognitive presences. Questions on Rovai's (2002) survey, the Classroom Community Scale,

provided an overall score of classroom community as well as scores on connectedness and learning. Connectedness was defined as "the feelings of the community of students regarding their connectedness, cohesion, spirit, trust, and interdependence" (Rovai, 2002, p. 206), whereas learning was defined as the "feelings of community members regarding interaction with each other as they pursue the construction of understanding and the degree to which members share values and beliefs concerning the extent to which their educational goals and expectations are being satisfied" (Rovai, 2002, p. 206-207). The open-ended survey questions gave participants the opportunity to convey their thoughts about community in a blended workshop. Thirty-four of the 42 participants who completed the pre-workshop survey also completed the post-workshop survey.

Interviews.

Interviews were used to get responses to open-ended questions, allowing participants to describe events in their own words. A semi-structured interview strategy allowed me to ask follow-up questions based on participants' responses, which in turn provided the opportunity for them to clarify any confusion and expand on their preliminary comments (McMillan & Schumacher, 2001). The interviews allowed for more depth of information than the surveys. Two interviews were conducted with each workshop participant for the purpose of gaining insight into their approach to learning in the workshop as well as their understanding of community. A semi-structured interview process was used to allow the flexibility to pursue emergent ideas (Bernard, 2006). Interviews were audio recorded and then transcribed, some by me and others by a research assistant.

The first interviews were held as soon as possible after the end of the workshop (Appendix C). Eleven people were interviewed on a variety of questions that focused on their participation

in the workshop, both online and face-to-face, and their perceptions of community in both learning environments. Interviews typically lasted about 30 to 45 minutes. On the consent form, participants indicated whether or not they agreed to be interviewed. Most participants who indicated interest were subsequently interviewed. There were two participants who provided consent but were not interviewed were participants with whom I could not find a suitable meeting time.

Follow-up interviews were held approximately four to six months after the first interview, at the convenience of participants (Appendix D). Ten people participated in the second interview, representing a 9% attrition rate; the remaining participant from the first interview did not respond to emails requesting a second interview. The purpose of the second interview was to explore whether participants had implemented anything they learned in the workshop in their subsequent course designs or teaching practice, and to examine the impact of community on their learning. The second interviews tended to be shorter, between 20 and 30 minutes in length.

Observations.

Observations were used to examine participants firsthand in the study's natural setting. They allowed me to confirm details such as participant involvement as well as essential details about the structure of the workshop. Another advantage was that it allowed me to record details of the phenomena as it happened (Creswell, 2003).

I observed two workshop days and kept notes about the role of community and perceived learning in the workshop. Notes were also kept on workshop sessions, processes, and activities. Participant observation was an important data collection technique that allowed me to examine a level of detail that was not usually attainable through techniques such as surveys (Bernard, 2002). Observation also allowed me to collect data that can verify information gathered through

other methods (Gall et al., 2007). An observation protocol form was used to guide and record observations. The two-column form had space for descriptive and reflective notes (Creswell, 2003). Descriptive notes included workshop activities, such as the time and focus of the sessions, and whether they finished on time or took longer. The section on participant engagement was included to track what the participants were doing. The third section, questioning, was included to see what types of questions participants were asking and how they were being addressed. Space for additional comments was included at the bottom so they could be recorded as they emerged. I did not observe all participants, but rather, observed small groups of participants that had all provided consent to be observed. The observations provided opportunity to see if the workshop was being conducted as described, what sorts of activities participants were doing, and provided triangulation for data collected through interviews and surveys. My reflective notes allowed me to make note of things that were puzzling, questions to ask participants later in an interview, and make suppositions and guesses.

Online discussions.

Consistent with other research using the Community of Inquiry framework (Garrison, Anderson & Archer, 2000; Akyol, Vaughan & Garrison, 2011; Vaughan, 2004), I collected the participant contributions from the discussion board for analysis. Online discussions provided important data about the prevalence of indicators of the community of inquiry. An asynchronous communication tool, the discussion board found in Blackboard ™, was used by workshop participants and facilitators between face-to-face sessions to further discussion that enhanced learning. Between days one and two of the workshop, participants posted their learner, context, and content analyses. All participants and workshop facilitators read the posts, commented and asked clarifying questions about the analyses. Between days two and three of the workshop,

participants posted their course plans, with course outcomes, teaching and learning activities, and student assessment plans articulated. Feedback from others prompted them to further clarify and refine their plans.

Although all participants contributed to the discussion board, less than half consented to allow their online discussion posts to be used as part of the study. I only analysed those discussion threads in which consent was provided to be in the study, and could be retrieved without accessing posts by non-participants. Two discussion forums involving seven participants were analyzed as a part of this study.

Methods of Analysis

Surveys.

Data from the Likert-scale questions were added to SPSS (Statistical Package for the Social Sciences™) software for analysis. Descriptive statistics were tabulated for all Likert-scale questions. In addition, cross tabulations were conducted on some of the questions to identify interdependent relationships (Appendix E). Open-ended responses were transferred to Microsoft Word™ and then analyzed using thematic analysis.

Interviews.

Transcripts were examined several times to identify themes. Interviews were audio recorded, and then transcribed (refer to Appendix F for a sample of the different coding cycles). I then listened to each interview while checking the transcripts for accuracy. At the same time, I also conducted structural coding. This first cycle coding method "applies a content-based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question used to frame the interview" (Saldaña, 2009, p. 66). Coded segments were grouped together for more fine-tuned coding and analysis. It was therefore helpful when initially

coding the data, allowing the researcher to find related data quickly. According to Saldaña (2009), structural coding is appropriate for most qualitative studies that involve multiple participants and semi-structured interviews.

During the second reading of the transcript, I conducted descriptive coding. This method of coding summarizes the topic of a piece of text in a word or short phrase and can form the basis for further analysis. Codes can be analyzed across different time periods to assess participant change over time (Saldaña, 2009).

Provisional coding was then done. Provisional coding uses a pre-established list of codes, created from things such as the literature search or conceptual framework of a study. These codes can be modified, deleted, or new codes generated as data are coded and analyzed (Saldaña, 2009). In the study, provisional codes were established using the conceptual frameworks. Two research assistants also coded samples of the interview transcripts, and discussed their codes with me. Through that process the group came to general agreement about how to assign codes; I then continued alone to code the rest of the transcripts. The goal was to achieve a high rater of interrater reliability, to improve objectivity in coding (Rourke, Anderson, Garrison & Archer, 2000). The interrater reliability for the interview transcripts was 0.8125, and for the online discussion transcripts, the interrater reliability was 0.8824.

Finally, longitudinal coding was performed to examine changes and constancy within data (Saldaña, 2009), between the first and second interviews. Longitudinal coding examines questions such as, what has increased or emerged over time? What has decreased? What has had a cumulative effect? What are the surges or epiphanies (Saldaña, 2009)? This type of coding is appropriate for qualitative studies that look at changes in individuals or groups over time (Saldaña, 2009).

Online discussions.

Garrison, Anderson, and Archer's (2000) Community of Inquiry model formed the basis of the coding protocol for the online discussions. This protocol was implemented to identify social, cognitive, and teaching presences of the postings in the discussion board. Table 3.3 provides an overview of the coding protocol for teaching presence, Table 3.4 gives an overview of the cognitive presence protocol, and Table 3.5 has social presence.

Two research assistants and I used the protocol to code sample posts and then discuss their approach. Once the group had a reasonably high degree of consensus about assigning codes, I continued to code the rest of the online discussion posts individually. Inter-rater reliability for the interview transcripts was 0.8125, and 0.8824 for the online discussion transcript.

Table 3.3. Teaching Presence Coding Protocol

Category	Indicators	Examples	Code
Design and Organization	Setting curriculum (including assessment)	"Next, we'll work on finding activities and assessment strategies, and how they align with these outcomes."	TP-DE-1
	Designing methods	"I am going to divide you into groups, and you will debate..."	TP-DE-2
	Establishing time parameters	"Please post a message by Friday."	TP-DE-3
	Utilizing medium effectively	"Try to address issues that others have raised when you post."	TP-DE-4
	Establishing netiquette	"Keep your messages short."	TP-DE-5
	Making macro-level comments about course content	"This discussion is intended to give you a broad set of tools/skills which you will be able to use in deciding when and how to use different research techniques."	TP-DE-6
Facilitating Discourse	Identifying areas of agreement/ disagreement	"Joe, Mary has provided a compelling counter-example to your hypothesis. Would you care to respond?"	TP-FD-1
	Seeking to reach consensus	"Not sure if I have interpreted it the way you meant it."	TP-FD-2
	Encouraging, acknowledging, or reinforcing student contributions	"Thanks for sharing!"	TP-FD-3
	Setting climate for learning	"Don't feel self-conscious about 'thinking out loud' on the forum. This is the place to try out ideas after all."	TP-FD-4
	Drawing in participants, prompting discussion	"Thoughts on that one?"	TP-FD-5
	Assessing the efficacy of the process	"There is definite progress with course outcomes over last week."	TP-FD-6
Direct Instruction	Present content/ questions	"This course examines major trends in educational technology from pedagogical, social, and theoretical perspectives."	TP-DI-1
	Focus the discussion on specific issues	"I think that's a dead end. I would ask you to consider..."	TP-DI-2
	Summarize the discussion	"The first [learning outcome] gives an overall view of the course students are signing up for and the latter is more specific in terms of the expectations."	TP-DI-3
	Confirm understanding through assessment and explanatory feedback	"You're close, but you didn't account for..." "This is important because..."	TP-DI-4
	Diagnose misconceptions	"Remember that the outcomes themselves are more arching and thematic, rather than lesson-focused."	TP-DI-5
	Inject knowledge from diverse sources, e.g., textbook, articles,	Links to videos	TP-DI-6

	Internet, personal experiences (includes pointers to resources)		
	Responding to technical concerns	"If you want to include a hyperlink in your message, you have to..."	TP-DI-7

Source: Adapted from Garrison et. al, 2000.

Table 3.4. Social Presence Coding Protocol

Category	Indicators	Definition	Code
Affective	Expressing emotions	Conventional expressions of emotion	SP-AF-1
	Use of humor	Teasing, cajoling, irony, understatements, sarcasm	SP-AF-2
	Self-disclosure	Presents details of life outside of class, or expresses vulnerability	SP-AF-3
	Use of unconventional expressions to express emotions	Unconventional expressions of emotion, includes repetitious punctuation, conspicuous capitalization, emoticons	SP-AF-4
Open Communication	Continuing a thread	Using reply feature of software, rather than starting a new thread	SP-OC-1
	Quoting from others' messages	Using software features to quote others' entire message or cut and pasting selections of other's messages	SP-OC-2
	Referring explicitly to others' messages	Personal narratives/ descriptions/ facts (not used as evidence to support a conclusion)	SP-OC-3
	Asking questions	Author explicitly characterizes message as exploration, e.g. "Does that seem about right?" "Am I way off the mark?"	SP-OC-4
	Complimenting, expressing appreciation	Adds to established points but does not systematically defend/ justify/ develop situation	SP-OC-5
	Expressing agreement	Offers unsupported opinions	SP-OC-6
Group Cohesion	Vocatives	Addressing or referring to the participants by name	SP-CH-1
	Addresses or refers to the group using inclusive pronouns	Addresses the group as we, us, our group	SP-CH-2
	Phatics, salutations	Communication that serves a purely social function; greetings, closures	SP-CH-3

Source: Adapted from Garrison et. al, 2000.

Table 3.5. Cognitive Presence Coding Protocol

Phase	Indicators	Socio-cognitive processes	Code
Triggering Event	Recognize problem	Presenting background information that culminates in a question	CP-TE-1
	Sense of puzzlement	Asking questions; Messages that take discussion in a new direction	CP-TE-2
Exploration	Divergence – within the online community	Unsubstantiated contradiction of previous ideas	CP-EX-1
	Divergence – within a single message	Many different ideas/ themes presented in one message	CP-EX-2
	Information exchange	Personal narratives/ descriptions/ facts (not used as evidence to support a conclusion)	CP-EX-3
	Suggestions for consideration	Author explicitly characterizes message as exploration	CP-EX-4
	Brainstorming	Adds to established points but does not systematically defend/ justify/ develop situation	CP-EX-5
	Leaps to conclusions	Offers unsupported opinions	CP-EX-6
Integration	Convergence – among group members	Reference to previous message followed by substantiated agreement (e.g., "I agree because...") Building on, adding to others' ideas	CP-IN-1
	Convergence – within a single message	Justified, developed, defensible, yet tentative hypotheses	CP-IN-2
	Connecting ideas, synthesis	Integrating information from various sources – textbooks, articles, personal experience	CP-IN-3
	Creating solutions	Explicit characterization of message as a solution by participant	CP-IN-4
Resolution/ Application	Vicarious application to real world testing solutions	Providing examples of how problems were solved	CP-RE-1
	Defending solutions	Defending why a problem was solved in a specific manner	CP-RE-2

Source: Adapted from Garrison et. al, 2000. Used with permission.

Unit of Analysis

The unit of analysis refers to the chunk of data selected to be categorized. Researchers aim to "select a unit that multiple coders can identify reliably, and simultaneously, one that exhaustively and exclusively encompasses the sought-after construct" (Rourke, Anderson,

Garrison, & Archer, 2001, p. 16). Each approach to unit of analysis has its strengths and drawbacks.

Syntactical units are chunks such as sentences or words and are often used by researchers as a way to achieve high inter-rater reliability (Rourke et al., 2001). Difficulties arise when selecting a syntactical unit of analysis for online communication. People tend to communicate less formally in an online environment, using emoticons and acronyms, and do not necessarily use proper grammar and sentence construction. Using a paragraph as the unit of analysis may be problematic, as it can contain multiple variables (Rourke et al., 2001). Some researchers have used the message (single post or email, for example) as the unit of analysis (Marttunen, 1997; Garrison et al., 2000). Again, there may be more than one idea expressed in a message and therefore may contain multiple variables.

Another coding strategy has been to use the unit of meaning. Unlike syntactical units, the unit of meaning is not a fixed size but allows the researcher to identify discrete items of information from a segment of content. Major drawbacks to this approach are increased rater subjectivity and lower inter-rater reliability (Rourke et al., 2001).

Given the two units of analysis, the approach used in this study was to analyze the unit of meaning. Although it tends to have lower inter-rater reliability, it offers the possibility of capturing multiple ideas within a segment of context and, therefore, seemed appropriate for the study. For example, when coding one paragraph or chunk of text from the online discussion board, messages were analyzed for meaning. The author might demonstrate a sense of puzzlement (cognitive presence, triggering event phase) and exploration (information exchange), while also including indicators of social presence such as using phatics and complimenting another participant's course outcomes. Rather than trying to decide which code might be the

most appropriate for this chunk of text and assigning it one code, the reviewers assigned it all codes that were appropriate.

Integrity of the Study

Reliability of coding.

Reliability of coding is when multiple coders "reliably and consistently identify and qualify each instance of the object or variable they are looking for in the content" (Anderson & Kanuka, 2003, p. 174). Intercoder reliability is "the widely used term for the extent to which independent coders evaluate a characteristic of a message or artifact and reach the same conclusion" (Lombard, 2004). High inter-rater reliability can be a challenge for researchers but is essential to have confidence in the findings of a research study. If high intercoder reliability is missing from a study, then the interpretation of the data should not be considered valid (Lombard, 2004).

According to Neuendorf (2002), intercoder reliability is essential to reporting and assessing the findings of a research study. Although it does not guarantee validity, when intercoder reliability is not established, the data cannot be considered valid (Neuendorf, 2002). There are dozens of different measures used to calculate intercoder reliability but no universally accepted index or measure. The simplest method of calculating intercoder reliability is the percent agreement (PA) statistic, which is the number of agreements per total number of coding decisions. However, it is criticized with overestimating intercoder agreement since some agreement could be due to chance (Capozzoli, McSweeney & Sinha, 1999). Holsti's (1969) method is commonly used in research; the formula to calculate the coefficient of reliability (CR) is as follows:

CR = 3m / n1 + n2 + n3

Where: m = number of agreements between all coders, and

n1 = number of coding decisions made by rater 1

n2 = number of coding decisions made by rater 2

n3 = number of coding decisions made by rater 3 (Rourke et al., 2001)

Currently there is no consensus on the percentage of agreement of intercoder reliability that must be attained in a study (Rourke et al., 2001).

Reliability of coding was achieved in the study by having three coders look at samples of the interview transcripts and online discussion transcripts. I was one of the coders. Each coder went through the samples independently, and then the group discussed them, talking about their interpretations of the content and understanding of the coding protocol. These discussions improved the intercoder reliability of the research. During the session, the researcher quickly calculated the percent agreement statistic. When it reached approximately 80%, I continued on to code the rest of the data individually. Afterward, I calculated the PA using Holsti's formula. The interrater reliability for the interview transcripts was 0.8125, and for the online discussion transcripts, the interrater reliability was 0.8824. This represents a good rate of intercoder reliability (Gall, Gall & Borg, 2007) and indicates that the coding template was consistently applied.

Validity and reliability of case study research.

Four tests have been commonly used to ensure the quality of case study research: construct validity, internal validity, external validity, and reliability (Yin, 2003). Taken together, these tests verify that the research is trustworthy.

Construct validity.

Construct validity is "a type of external validity that refers to the extent to which the study represents the underlying construct" (McMillan & Schumacher, 2001, p. 586). Three strategies are used to ensure construct validity in a case study: multiple sources of evidence, establishing a chain of evidence, and having key informants review a draft of the case study report (Yin, 2009). Construct validity was achieved in this study by using multiple sources of evidence, including surveys with both Likert scale and open-ended questions, interviews at two different points in time, observation, and analysis of online discussion transcripts. A chain of evidence was established by using online discussion data and survey results to build on themes established through interview data. Key informants were given the opportunity to review a draft of the case study report; however, none of them opted to do so.

Internal validity.

Internal validity refers to "the degree to which extraneous variables are controlled" (McMillan & Schumacher, 2001, p. 593). Stated another way, is the researcher measuring what he or she wants to know? Internal validity is addressed using four different tactics: triangulation, explanation building, rival explanations, and long-term observation (Yin, 2009; Merriam, 1998). Triangulation was achieved using multiple data sources to confirm findings. Explanation building was done to analyze the data by building an explanation about it. Initial findings were compared to other data and revised as needed. Rival explanations were considered at the data analysis stage, and long-term observation was employed at the data collection stage.

External validity.

External validity is "the extent to which results of a study can be generalized to other subjects, conditions or situations" (McMillan & Schumacher, 2001, p. 591). As Merriam (1998)

points out, case study research is often conducted in order to understand a particular situation (the case) in depth, not a random sampling and therefore is not conducted in order to find out the general situation of a large number of people. Nevertheless, one way of addressing external validity is by using rich, thick descriptions that allow for reader or user generalizability (Merriam, 1998). Richly detailed descriptions provide enough information that the reader will be able to determine if and how the case study applies to his or her own situation. A full, detailed description of the case was used in the study.

Reliability.

Reliability refers to "the extent to which research findings can be replicated" (Merriam, 1998, p. 205). According to Merriam (1998), reliability in social sciences research is challenging because human behavior is constantly changing, and is not uniform:

> Because what is being studied in education is assumed to be in flux, multifaceted, and highly contextual, because information gathered is a function of who gives it and how skilled the researcher is at getting it, and because the emergent design of a qualitative case study precludes a priori controls, achieving reliability in the traditional sense in not only fanciful but impossible. Furthermore, for the reasons discussed, replication of a qualitative study will not yield the same results. That fact, however, does not discredit the results of the original study (Merriam, 1998, p. 206).

Merriam (1998) suggested that instead of aiming for replication, case study researchers should try to achieve dependability or consistency, so that results make sense and are consistent with the data collected. In order to achieve more reliable results, researchers can use a case study protocol with well documented procedures and identify researcher bias (Yin, 2009). To address reliability issues, I created a protocol for data collection (Appendix G) and have acknowledged researcher

bias. Triangulation can also increase reliability (Merriam, 1998); multiple methods of data collection were used in the study.

Validity of a mixed methods approach.

According to Smith (2006), validity in mixed methods studies is complex and challenging. One common issue researchers must deal with is when different data collection methods have different standards of validity. Another potential issue is when different data point to different, conflicting results. The researcher must then decide if greater weight is given to the component with greater internal validity, or the part with more "descriptive accuracy or fidelity" (Smith, 2006, p. 465). Although researchers are still grappling with these problems, mixed methods researchers often demonstrate their study's validity by using triangulation (Smith, 2006). The validity of a mixed methods study is also strengthened through descriptive adequacy, fidelity, comprehensiveness, authenticity, and ecological validity (Smith, 2006).

Triangulation.

When referring to mixed methods research, the term triangulation can have three different meanings and uses within a study. The first is "to confirm inferences made from the findings of several research methods and approaches" (Smith, 2006, p. 465). The second usage of the term triangulation is to uncover complementary data (Smith, 2006), in which the researcher is not looking to confirm the findings in multiple ways, but rather to discover different aspects of the phenomena under study, or add richness and detail to the findings (Greene et al., 1989). The third meaning of the term is when "divergence of findings across methods may suggest either (a) that the methods did not function correctly or (b) an alternative construction, theory, or map is revealed by the contradiction of findings" (Smith, 2006, p. 465).

Given the meanings of triangulation as outlined above, mixed methods provided two types of triangulation in my study. I used quantitative data to confirm some qualitative findings. For example, qualitative data indicated that participants generally took a deep approach to learning in the workshop. I used quantitative data to confirm this finding. According to Greene, Caracelli, and Graham (1989), this represents the understanding of triangulation in which different data sources are used to enhance the validity of the results. Used in this way, triangulation through mixed methods designs can mitigate various types of biases, including method bias and researcher bias.

The study also used different data sources to inform the study in different ways. Qualitative data were gathered to understand the role of the online and face-to-face learning communities and the effect they had on participants' learning. Some quantitative data were collected for different reasons, not meant to triangulate the data, but rather to provide statistical information on learning approach and community. Results of the study were thereby enhanced and enriched by the different data sources (Greene et al., 1989).

Descriptive adequacy.

Another of the measures of validity for a mixed methods study is descriptive adequacy. I believe that my study demonstrates descriptive adequacy.

Fidelity.

Since there was no treatment in this study, I assumed that fidelity referred to the extent to which the study was conducted in accordance with the case study protocol. Implementation of my study showed close fidelity to the original case study protocol. One thing that I needed to change was the timeline for the second interviews. It was not convenient for some of the

participants to have a second interview exactly at the six-month point, so I changed the timing of it to a four to six-month window, giving participants more flexibility.

Comprehensiveness.

Another measure of the validity of a mixed methods study is its comprehensiveness. My research study was very comprehensive, involving a number of different data collection techniques and lasting over a year. Data analysis was also lengthy and exhaustive.

Authenticity.

Authenticity in research can be described as "the faithful reconstruction of participants' multiple perceptions" (McMillan & Schumacher, 2001, p. 415). The researcher strives for authenticity, not only as a representation of the participants' experiences, but also out of responsibility to the wider community that is affected by the research. In my research, I strived for authenticity in data collection and analysis. I did not set aside data that cast a less positive view of participants' learning, but examined it carefully and included it in the findings.

Ecological validity.

Ecological validity refers to "the extent to which the results of an experiment can be generalized from conditions in the research setting to particular naturally occurring conditions" (Gall, Gall & Borg, 2007, p. 639). In other words, if the same results can only be obtained under very specific conditions, the study has low ecological validity. My study was not an experimental design. Data collection techniques such as surveys and online discussion forums would have required minimal to no interaction with the researcher. Therefore, I expect my study to have medium to high ecological validity.

Validity of the survey instruments.

Three different surveys were used in the study: the Study Process Questionnaire (Biggs, 1987), the Classroom Community Scale (Rovai, 2002), and the Community of Inquiry Survey (Arbaugh et al., 2008). All three instruments have gone through different stages of validation.

Validation of the Study Process Questionnaire.

The Study Process Questionnaire (Biggs, 1987) is a questionnaire designed to measure learning approaches. It has 42 questions that measure deep, surface, and achieving approaches to learning. A study done by Burnett and Dart (2000) provided "strong support for the construct validity and reliability of the three approach scales contained in the SPQ" (p. 98).

Validation of the Classroom Community Scale.

The Classroom Community Scale (Rovai, 2002) was designed to measure students' sense of community in online courses. Survey questions were written to give an overall score of classroom community, as well as scores on connectedness and learning. In a study, Rovai (2002) found that the Classroom Community Scale was a valid measure of classroom community with the overall scale and both subscales showing high internal consistencies. According to Rovai (2002), the instrument also showed high content and construct validity.

Validation of the Community of Inquiry Survey.

The Community of Inquiry Survey included 34 Likert-scale items with a scale of 0 (strongly disagree) to 4 (strongly agree). The survey was designed to evaluate learners' perceptions of cognitive, social, and teaching presences in a course. Arbaugh et al. (2008) validated the instrument with 287 graduate students from four different higher education institutions studying in either online education or business courses. The Cronbach's alpha for each presence were as follows: 0.95 for cognitive presence, 0.94 for teaching presence, and 0.91

for social presence (Arbaugh et al., 2008). Bangert (2009) did a subsequent study to validate the tool with both undergraduate and graduate students (n = 1173) in blended and fully online courses. He stated that "there is strong theoretical support for the CoI Survey as an instrument for assessing the influences of teaching, social and cognitive presence on the students' perceptions of the quality of their online learning experiences" (Bangert, 2009, p. 110). However, he also noted that there is little research about the validity of using the Community of Inquiry Survey with participants in blended programs (Bangert, 2009).

Role of the Researcher: Observer – Participant

According to Gall et al. (2007), the role of the case study researcher often means that he or she is in contact with and personally involved in the phenomenon being studied. The amount of contact can vary along a spectrum from complete observer to complete participant. In the study, I assumed the role of observer-participant, acting primarily as an observer, "entering the setting only to gather data and interacting only casually and indirectly with individuals or groups while engaged in observation" (Gall et al., 2007, p. 277). While I tried not to influence participants, seemingly innocuous interactions with participants or even my presence in the room may have affected their behavior in some way (Gall et al., 2007). My influence on participant behavior was probably less pronounced in the online discussion forums, where I played more of an observer role. Because I did not access the discussions until after the workshop ended, participants would not have felt my presence during the discussion. They may have still behaved a bit differently knowing that a researcher would be reading the discussions at a later time.

A researcher must make decisions regarding contributions, especially when observing, and the extent of expertise to reveal (Creswell, 2003). I did not know any of the interview participants prior to the study but knew one of the survey respondents beforehand. I revealed to

participants that I worked in the Teaching & Learning Centre as an instructional designer and had facilitated the workshop in the past. None of the participants withdrew from the study after finding out my previous role in the workshop.

In qualitative research, the researcher's background and previous experience can help provide a better interpretation of the case study. According to Yin (2009), it is not enough to record information; the case study researcher must be able to interpret it by making connections and distinctions, recognizing when more information is needed. My experience as an instructional designer and former facilitator of the course design workshop provided me with a fuller understanding of the workshop, as well as access to participants and data. Through facilitating the workshop, I became very familiar with the purpose and structure of the sessions. As a result, I was able to focus on participants' interaction and their learning, rather than struggling to understand the workshop's curriculum and organization.

Researcher Bias

Researcher bias is a potential issue with case study research, as well as other types of qualitative research. Data collection can be problematic in that observations are prone to interpretation and thus are not complete or neutral; the researcher adds his or her own perspective to the phenomenon being studied (Gall et al., 2007). However, according to Gall et al. (2007), observations are usually accurate enough for research purposes. An important measure to guard against researcher bias is to triangulate the data using multiple methods of data collection (Gall et al., 2007).

Since I had facilitated the workshop in the past, I came to the study with prior experiences and understanding of interactions between participants and between the facilitators and participants. While this could be seen as a benefit, it likely also biased me in some ways,

particularly during observations. Using multiple data sources was critical in overcoming researcher bias.

Yin (2009) stated that case study researchers must caution against using data to substantiate preconceived notions. In order to avoid this type of bias, the researcher must be open to contrary findings and alternative explanations (Yin, 2009). For example, in the research there were data that pointed to a surface approach to learning by some participants. Rather than ignoring the data, they were reported.

A personal bias of mine was that online discussions and activities can be just as effective as they are in the face-to-face environment. This bias could be perceived positively as it allowed me to remain open-minded about the learning environments. Another belief I held was that a deep approach to learning was preferable to a surface approach. I believe these biases are the result of my experience as a facilitator and as an online learner.

Impact of Beliefs on the Study

My personal stance and biases may have had an impact on the results of the study. My epistemological stance was that the truth is subjective, context-dependent, and may change as circumstances change. It is not an irrefutable fact waiting to be discovered, but rather, it is dependent on the perspective of the knower and his or her experiences in the world.

The stance that truth is subjective and dependent on the knower allowed me to reconcile contradictory findings in the study. For example, interview participants occasionally made statements that were misaligned with statements from other participants. Rather than discounting such assertions, I believed both participants, assuming that they had different accounts because they experienced things differently.

Results of the study were potentially influenced by my experiences as well. Since I had facilitated the workshop in the past, I went in to the study with some ideas of what the learning communities might offer to participants in terms of benefits. The study was therefore susceptible to researcher bias, making it absolutely essential that I triangulate the findings by using multiple data sources.

Ethical Considerations

I gained consent by the University of Calgary's Conjoint Faculties Research Ethics Board to conduct the research and followed the guidelines laid out by the board. People were informed about the research prior to their participation, including the purpose of the study, what they were being asked to do, the types of information being collected, and what would happen to the information being collected. They were told that there would be no remuneration for participating, and no foreseeable risks. There was no deception in the study. Participants were informed that they could withdraw from the study at any time, but the data collected up to that point would be used in the study.

Interview participants were offered the choice of reviewing their own transcripts after the audio was transcribed. To protect individuals' identities, names were removed from the transcript. Additionally, if a participant disclosed information that could be used to identify himself or herself, such as a course name and number, the information was replaced with something more generic. For example, the course name and number might be replaced with "a second-year undergraduate Arts course." Participant names were not used in any of the records or reports. Participation was confidential.

Participants were able to provide consent for participation in selected methods of data collection without having to consent to all. For example, almost forty participants agreed to

participate in the surveys, while thirteen provided consent to the interviews. Therefore, if one participant in a group did not want to be observed, I did not observe that group. Similarly, if one participant in an online discussion group did not want their data used, I did not access the discussion forum. Such measures were necessary to protect the integrity of the study. However, they limited the amount of data collected through observation and online discussion forums.

Successes and Challenges of the Data Collection Methods

Successes of the data collection methods.

Several aspects of the methodology worked particularly well for the study. The semi-structured interview approach allowed me to pursue lines of inquiry that I had not anticipated before starting the interviews. Also, using different coding strategies for the interview data helped me to identify the themes and refine them over time. I used multiple data sources to triangulate the findings, confirming that there was a solid basis for the emerging themes. For the online discussions, using the Community of Inquiry coding protocol (Garrison, Anderson & Archer, 2000) was beneficial because it was tested and refined by others prior to my using it. Additionally, using the validated survey instruments was preferential to my trying to create a survey for the study.

Challenges of the data collection methods.

The methodology was not without challenges. I interviewed the participants twice: once immediately following the end of the workshop, and again four to six months later. The extended data collection period slowed down the process, requiring me to spend more than a year on data collection. Ideally I would have preferred to complete it much quicker. Another challenge was using the Study Process Questionnaire (Biggs, 1987), which was written for use with students. Since the participants in my study were faculty members and graduate students, I had to remove

certain questions from the Study Process Questionnaire that related to exams and grades. A final challenge was having only 34 participants for the quantitative data. Optimally it would have been better to have 50 or more respondents in order to do more sophisticated statistical analysis, but getting more participants would have required an even longer period of data collection.

Summary

This mixed methods case study used multiple methods of gathering data to answer the research questions. Qualitative techniques included interviewing both participants and workshop facilitators, analyzing online discussions, and researcher observations. Quantitative data was gathered through pre and post-workshop surveys and analyzed for descriptive statistics. Interview transcripts and open-ended survey question responses were analyzed thematically, and online discussions were analyzed using a coding protocol based on the CoI model. The next chapter presents the findings of the research.

CHAPTER FOUR: FINDINGS

Research Questions

This chapter reports on the analysis of all data sources and the findings obtained from the data analysis techniques as outlined in Chapter Three. To answer the following five research questions, survey data were used, including Likert scale and open-ended question responses, interview data, and data from the online discussion board.

1. In what ways do workshop participants take a deep approach to learning in a blended faculty development workshop?
2. In what ways do workshop participants take a surface approach to learning in a blended faculty development workshop?
3. How does the role of the face-to-face learning community affect the approach that participants take to the workshop?
4. How does the role of the online learning community affect the approach that participants take to the workshop?
5. What is the relationship between the Community of Inquiry model and the effects of the learning community on learning approach taken by participants in the workshop?

Study Participants

Survey participants.

Tables 4.1 and 4.2 provide information on the thirty-four participants who responded to survey questions that described the extent of their teaching experience. These data were collected on the pre-workshop survey and report on the valid percent of respondents. Valid percent calculates the percentage of the number of respondents, not the total number of participants. For

example, if 33 out of 34 participants answer a question, the valid percent calculates the responses out of 33, not 34.

Table 4.1. Number of Courses Taught in Higher Education

Range	No.	Valid %
0-5	20	62.5
6-20	9	28.1
More than 20	3	9.4

The demographic information collected from survey respondents indicated that the participants tended to be early in their teaching career, many with limited teaching experience. Two of the survey respondents (n = 34) had no teaching experience in higher education. Less than 10% of respondents had extensive teaching experience, having taught more than 20 courses. This was not surprising since the purpose of the workshop was to learn about course design, and most faculty members with established careers had a great deal of experience with course design already.

Table 4.2. Years of Teaching Experience in Higher Education

Range	No.	Valid %
0-3	15	48.4
4-10	13	42.1
More than 10	3	9.6

Interview participants.

Demographic data for the interview participants shows that the majority of them were younger, with three participants (n = 11) between 20 and 29 years of age, four between 30 and 39, one participant in the 40 to 49 age bracket, and three participants aged 50 or older. Eight of the 11 interview participants were women and three were male. Five were faculty members,

including sessional faculty, representing just under half of the participants. One participant was a teaching assistant, and three were graduate students. The teaching assistant and two of the graduate students had some teaching experience. Participants who indicated 'other' as their role included one staff member who conducted workshops, and one person with an administrative role at the university.

As with survey participants, people who participated in the interviews tended to be early in their teaching careers, with notable exceptions. Six of the 11 participants had taught five courses or less in higher education, two had taught six to 20 courses, and three of them had taught more than 20 courses. Stated another way, six of the interview participants had taught three years or less, three had taught four to ten years, and two had taught more than ten years in higher education. Two of the interview participants had no teaching experience in higher education.

Likert-scale Survey Question Results

Deep and surface approaches to learning.

Results of the Study Process Questionnaire showed that most participants generally reported that they took a deep approach to learning. Table 4.3 includes statistical evidence to support this claim. Ninety-one percent of respondents (n = 34) agreed with the statement, 'I find that at times studying gives me a feeling of deep personal satisfaction,' indicating that they found satisfaction in learning the material. Intrinsic satisfaction is consistent with a deep approach to learning (Biggs & Tang, 2011). Eighty-eight percent agreed with the statement, 'While I am studying, I often think of real life situations to which the material that I am learning would be useful,' and 94.1% agreed with the statement, 'In reading new material I often find that I'm continually reminded of material I already know and see the latter in a new light.' Applying new learning to different contexts and making connections between ideas are also indicative of a deep

approach to learning (Ramsden, 2003). Fully 100% of respondents agreed that, 'I have a strong desire to excel in all my studies.' According to Biggs and Tang (2011), being personally motivated to do one's best, rather than simply passing, is consistent with a deep approach to learning. A large majority of respondents (88.2%) agreed with the statement, 'I find that studying academic topics can at times be as exciting as a good novel or movie,' while 79.4% agreed with the statement 'I find most new topics interesting and often spend extra time trying to obtain more information about them.' Personal interest in a topic is another indicator of a deep approach to learning (Biggs & Tang, 2011). Most respondents (94.1%) reported that they try to relate what they learned in one subject to that in another. Similarly, 94.1% stated that they try to relate new material to what they already know on that topic. Making connections between previous learning and new ideas also indicates a deep approach to learning (Ramsden, 2003). Eighty-five percent agreed with the statement, 'I usually become increasingly absorbed in my work the more I do,' which demonstrates intrinsic motivation to learn. The majority of respondents (73.5%) disagreed with the statement, 'I find it best to accept the statements and ideas of my instructors and question them only under special circumstances.' Therefore, the majority think that questioning new ideas is fine. Biggs and Tang (2011) stated that focusing on isolated facts tends to indicate a surface approach, while students who try to achieve conceptual understanding tend to use a deep approach to learning.

Table 4.3. Survey Results Indicating a Deep Approach to Learning

	Strongly Agree + Agree	Neutral	Strongly Disagree + Disagree
	No. (%)	No. (%)	No. (%)
I find that at times studying gives me a feeling of deep personal satisfaction	31 (91.2)	1 (2.9)	2 (5.9)
While I am studying, I often think of real life situations to which the material that I am learning would be useful.	30 (88.2)	3 (8.8)	1 (2.9)
I have a strong desire to excel in all my studies.	34 (100.0)	0 (0)	0 (0)
In reading new material I often find that I'm continually reminded of material I already know and see the latter in a new light.	32 (94.1)	1 (2.9)	1 (2.9)
I find that studying academic topics can at times be as exciting as a good novel or movie.	30 (88.2)	4 (11.8)	0 (0)
I try to relate what I have learned in one subject to that in another.	32 (94.1)	1 (2.9)	1 (2.9)
I usually become increasingly absorbed in my work the more I do.	29 (85.3)	3 (8.8)	2 (5.9)
I find most new topics interesting and often spend extra time trying to obtain more information about them.	27 (79.4)	3 (8.8)	4 (11.8)
I try to relate new material, as I am reading it, to what I already know on that topic.	32 (94.1)	1 (2.9)	1 (2.9)
I find it best to accept the statements and ideas of my instructors and question them only under special circumstances.	5 (14.7)	4 (11.8)	25 (73.5)

Other statements had less definitive results from the ones listed here. A few of them had mixed results which may indicate that some participants tend to take a deep approach while others might take a surface approach. None of the data suggested that participants tend to take a surface approach to learning tasks.

One interesting finding is that only 52.9% of respondents (n = 34) agreed (Strongly Agree + Agree) with the statement, 'I learn best from presenters who work from carefully prepared

notes and outline major points neatly on the blackboard.' Perhaps the chalk board is not used as frequently today as in the past, but using PowerPoint™ along with a lecture is certainly used in higher education. It would be interesting to know if the participants who do not learn best with this method have adopted other ways of teaching their courses.

Classroom Community Scale results.

Results from the Classroom Community Scale are included in Table 4.4. These data show that most participants felt a sense of community in the workshop.

Table 4.4. Survey Results from the Classroom Community Scale

	Strongly Agree + Agree		Neutral		Strongly Disagree + Disagree	
	No.	%	No.	%	No.	%
I feel that participants in this workshop care about each other.	31	94.1	2	5.9	0	0
I feel connected to others in this workshop.	31	97.1	1	2.9	0	0
I do not feel a spirit of community.	1	3.0	4	12.1	28	84.8
I trust others in this workshop.	30	88.2	4	11.8	0	0
I feel that this workshop results in only modest learning.	5	14.7	0	0	29	85.3
I feel that I am given ample opportunities to learn.	32	94.1	1	2.9	1	2.9
I feel that this workshop does not promote a desire to learn.	1	2.9	1	2.9	32	94.1

It is interesting to note that, although the vast majority of respondents agreed with the statement, 'I feel that I am given ample opportunities to learn' (94.1% Strongly Agree + Agree) and disagreed with the statement, 'I feel that this workshop does not promote a desire to learn'

(94.1% Strongly Agree + Agree), there were several respondents who agreed that ‘I feel that this workshop results in only modest learning (14.7% Strongly Agree + Agree). Since participants had the opportunity and encouragement to learn, the logical result would be that the workshop resulted in considerable learning. It would be interesting to know why this was not the case for several of the participants.

Community of Inquiry Survey instrument results.

Community of Inquiry Survey instrument results are broken into three categories: teaching presence, social presence, and cognitive presence.

Teaching presence.

In Table 4.5, the data show that participants felt a strong teaching presence regarding certain aspects of the workshop, but not all. For example, 73.5% (n = 34) of participants agreed with the statement, ‘The facilitators helped keep the participants on task in a way that helped me to learn,’ and 72.7% of participants agreed that ‘The facilitators provided feedback in a timely fashion.’

Table 4.5. Teaching Presence: Community of Inquiry Survey Instrument Results

	Strongly Agree + Agree		Neutral		Strongly Disagree + Disagree	
	No.	%	No.	%	No.	%
The facilitators clearly communicated important workshop topics.	32	94.1	1	2.9	1	2.9
The facilitators were helpful in guiding the class towards understanding topics in a way that helped me clarify my thinking.	31	91.2	2	5.9	1	2.9
The facilitators helped keep the participants on task in a way that helped me to learn.	25	73.5	8	23.5	1	2.9
The facilitators' actions reinforced the development of a sense of community among participants.	26	78.8	6	18.2	1	3.0
The facilitators provided feedback that helped me understand my strengths and weaknesses.	27	79.4	6	17.6	1	2.9
The facilitators provided feedback in a timely fashion.	24	72.7	9	27.3	0	0

Social presence.

Results on questions aimed at social presence are very interesting. Participants indicated that the face-to-face learning environment had much more social presence than the online environment. Table 4.6 includes selected results.

Table 4.6. Social Presence: Community of Inquiry Survey Instrument Results

	Strongly Agree + Agree		Neutral		Strongly Disagree + Disagree	
	No.	%	No.	%	No.	%
Getting to know other participants gave me a sense of belonging in this workshop.	31	91.2	1	2.9	2	5.9
I felt comfortable participating in the workshop discussions.	32	94.1	1	2.9	1	2.9
I felt comfortable conversing through the online medium.	23	67.6	8	23.5	3	8.8
Online or web-based communication is an excellent medium for social interaction.	18	52.9	10	29.4	6	17.6
Online discussions helped me to develop a sense of collaboration.	14	41.2	14	41.2	6	17.6

The workshop was offered in a blended learning format, with some sessions offered face-to-face, with other activities occurring online. The majority of interaction occurred in the face-to-face environment; perhaps this had an impact on participants' responses. However, 52.9% of participants agreed with the statement, 'Online or web-based communication is an excellent medium for social interaction.' If this finding is representative of instructors across faculties and at different stages of their teaching career at the University of Calgary, it is informative about their comfort and preferences for mode of delivery for professional development.

Cognitive presence.

Table 4.7 includes selected results relating to questions about cognitive presence. As with social presence, the data indicated that participants found the online learning environment to be less valuable than the face-to-face learning environment; only half the participants agreed with the statement, 'Online discussions were valuable in helping me appreciate different perspectives.' Questions that were not directed to a specific delivery mode indicated that most

participants felt a strong cognitive presence in the workshop. For example, 88.2% of participants agreed with the statement, 'Brainstorming and finding relevant information helped me resolve content related questions,' and 97.1% agreed with the statement, 'Learning activities helped me construct explanations/ solutions.'

Table 4.7. Cognitive Presence: Community of Inquiry Survey Instrument Results

	Strongly Agree + Agree		Neutral		Strongly Disagree + Disagree	
	No.	%	No.	%	No.	%
Problems posed increased my interest in issues raised in the workshop.	32	94.1	1	2.9	1	2.9
Brainstorming and finding relevant information helped me resolve content related questions.	30	88.2	3	8.8	1	2.9
I have developed solutions to workshop problems that can be applied in practice.	27	79.4	6	17.6	1	2.9
Learning activities helped me construct explanations/ solutions.	33	97.1	0	0	1	2.9
Online discussions were valuable in helping me appreciate different perspectives.	17	50.0	13	38.2	4	11.8

Data from Online Discussion Boards

Eight of the 34 participants provided consent for me to have access to their online discussion board data. Data from seven participants were examined; the eighth participant did not post in the discussion board. Two online discussion forums were examined in this study. There were sixteen original posts and thirty-four responses to an original post, making fifty posts overall that formed this part of the study.

Teaching presence.

Table 4.8 shows the number and percentage of indicators of teaching presence in the online discussion boards that were included in the study. The data suggested that teaching presence was most evident in the area of direct instruction. This was not surprising for the course design workshop as it was offered in a blended format, and some aspects of teaching presence could be accomplished in the face-to-face environment instead of online. For example, the facilitators might offer specific instructions, establish time parameters, and summarize the discussion in the face-to-face classroom. It is possible that the discussion board topics heavily influenced teaching presence, since participants were asked to share their course outcomes in one discussion forum, and their course plans in the other. Therefore, the participants were responsible for many incidences of teaching presence.

Table 4.8. Prevalence of Teaching Presence in Online Discussions

Category	Indicators	Number (Frequency counts)	Percent (Of total frequency counts)
Design and Organization	Setting curriculum (including assessment)	1	2.4%
	Designing methods	0	0.0%
	Establishing time parameters	0	0.0%
	Utilizing medium effectively	0	0.0%
	Establishing netiquette	0	0.0%
	Making macro-level comments about course content	0	0.0%
Facilitating Discourse	Identifying areas of agreement/ disagreement	0	0.0%
	Seeking to reach consensus	1	2.4%
	Encouraging, acknowledging, or reinforcing student contributions	4	9.8%
	Setting climate for learning	0	0.0%
	Drawing in participants, prompting discussion	2	4.9%
	Assessing the efficacy of the process	1	2.4%
	Sharing experience	0	
Direct Instruction	Present content/ questions	22	53.7%
	Focus the discussion on specific issues	5	12.2%
	Summarize the discussion	2	4.9%
	Confirm understanding through assessment and explanatory feedback	1	2.4%
	Diagnose misconceptions	1	2.4%
	Inject knowledge from diverse sources, e.g., textbook, articles, Internet, personal experiences (includes pointers to resources)	1	2.4%
	Responding to technical concerns	0	0.0%
Totals:		**41**	**100%**

Social presence.

Table 4.9 includes data on the prevalence of social presence in the online discussion forums used in the study. Almost all indicators of social presence from the Community of Inquiry model were found in the online discussions. The only indicator that was absent was quoting from another person's message. The indicators that were found frequently were continuing a thread (24 incidents), referring explicitly to others' messages (23 incidents), complementing or expressing appreciation (34 incidents), using vocatives or addressing

participants by name (23 incidents), and using phatics or salutations (communication that serves a purely social function, such as 'Hi'; 20 incidents). The data suggested that the online discussions showed a wide variety of indicators of social presence, and for some indicators, the online discussions included many instances of those indicators.

Table 4.9. Prevalence of Social Presence in Online Discussions

Category	**Indicators**	**Number (Frequency counts)**	**Percent (Of total frequency counts)**
Affective	Expressing emotions	4	2.8%
	Use of humor	1	.7%
	Self-disclosure	1	.7%
	Use of unconventional expressions to express emotions	5	3.5%
Open Communication	Continuing a thread	24	17%
	Quoting from others' messages	0	0.0%
	Referring explicitly to others' messages	23	16.3%
	Asking questions	2	1.4%
	Complimenting, expressing appreciation	34	24.1%
	Expressing agreement	2	1.4%
Group Cohesion	Vocatives	23	16.3%
	Addresses or refers to the group using inclusive pronouns	2	1.4%
	Phatics, salutations	20	14.2%
Totals:		**141**	**100%**

Cognitive presence.

Table 4.10 shows the data on the number of incidences of cognitive presence in the online discussion forums. Almost all cognitive presence indicators were found in the forums used in the study. The most frequent indicators of cognitive presence included a sense of puzzlement (13 incidents), suggestions for consideration (13 incidents), and convergence among group members (10 incidents). Messages included resolution/ application indicators less frequently than those of the other phases.

Table 4.10. Prevalence of Cognitive Presence in Online Discussions

Prevalence of Cognitive Presence in Online Discussions

Phase	**Indicators**	**Number (Frequency counts)**	**Percent (Of total frequency counts)**
Triggering Event	Recognize problem	2	3.1%
	Sense of puzzlement	13	20.3%
Exploration	Divergence – within the online community	1	1.6%
	Divergence – within a single message	6	9.4%
	Information exchange	6	9.4%
	Suggestions for consideration	13	20.3%
	Brainstorming	1	1.6%
Integration	Convergence – among group members	10	15.6%
	Convergence – within a single message	0	0.0%
	Connecting ideas, synthesis	3	4.7%
	Creating solutions	5	7.8%
Resolution/ Application	Vicarious application to real world testing solutions	1	1.6%
	Defending solutions	3	4.7%
Totals:		**64**	**100.1%**

From the previous three tables, we can see that all types of presences, teaching, social, and cognitive, were included with various frequencies in the online discussion forums. Even though the workshop was blended, the forums were used to convey meaning and enhance learning in various ways. Thus, the forums were used in a robust manner as opposed to simply an add-on to the face-to-face portion of the workshop.

Deep Approach to Learning

The first research question asked, "In what ways do workshop participants take a deep approach to learning in a blended faculty development workshop?" Through analyzing the open-ended survey questions and interview data, seven themes emerged in connection with a deep approach to learning (Ramsden, 2003). The themes are: considerable learning, highly interested or engaged in the learning process, apply to own context, desire to excel or improve, making connections, reflection, and sense of satisfaction or confidence.

Considerable learning.

During the interviews, eight of the participants mentioned areas of course design or teaching and learning issues where they had considerable learning. Five participants mentioned that they had never heard of or thought of a particular theory or approach; two had heard of them in the past but had not explored them in any detail. One participant articulated the importance of the learning experiences as follows: "The experience of deliberately sitting down and analyzing different aspects of the needs of my course, the discipline of sitting down and doing that… was not something I'd formally done before in designing a course, and it was useful" (P6, first interview). Participants found the workshop to be a valuable learning experience for many different reasons, such as selecting appropriate learning activities for their course and gaining strategies for issues such as large-enrollment courses. They identified activities such as planning their course, giving and receiving feedback, and discussing course design issues as particularly helpful. None of the participants identified the presentations as helpful in terms of their learning, which suggested that they preferred a more participatory role in teaching and learning activities.

Considerable learning was a theme that remained fairly constant from the first to second interviews for seven of the participants; that is, if they recounted considerable learning during the first interview, most of them reiterated it in the second interview. In this quote, the same participant identified the same thing as an important take-away from the workshop, months later: "What's really stuck with me is following through the steps of the ADDIE [Analyze, Design, Develop, Implement, Evaluate] model... So I'm following through that cycle, and it's a simple concept, but I kind of needed it to be beaten into my head" (P6, second interview). Though participants could not recount every detail from the workshop in the second interview, half a year later they talked about key concepts and ideas that resulted in considerable learning for them.

Responses to open-ended survey questions also indicated that considerable learning had occurred in the workshop. One participant described the strengths of the different delivery modes, “Face-to-face: Clarified ambiguities, set practical examples, helped prompt interaction upon the pool of ideas. Online: Complemented at the time of convenience, allowed more thorough thoughts upon topics” (P9). Though not all participants completed the online activities, six of the participants who did said it contributed to their learning.

Highly interested or engaged in the learning process.

During the first interview, seven of the participants made statements that indicated high interest or engagement in the learning process in the course design workshop, as illustrated in this quote: “There were lots of engaging activities, so it was more that the workshop takers were doing a good deal of activities. It was not just informative; it was engaging” (P9, first interview). While some participants continued to show a high level of interest or engagement in the learning at the four to six month point, not all demonstrated a sustained level of enthusiasm. Therefore, this theme is one that diminished somewhat over time.

For the five participants who continued to show high interest or engagement regarding the learning, they demonstrated interest in ways such as doing further reading or research into topics that were particularly salient to them, such as promoting student engagement or creating concept maps. A couple of participants stated that they continued to have conversations with other people on course design issues such as writing course outcomes.

Open-ended survey question responses supported this theme. Five of the 34 survey respondents noted that they found the group work interesting. Aspects of group work they appreciated included discussions, receiving feedback from colleagues, and feeling a sense of community. One participant wrote that the facilitators allowed participants to go off topic to

discuss issues and questions that interested them, which was helpful. Four participants stated that they found the face-to-face sessions more interesting or engaging.

Apply to own context.

All 11 participants who were interviewed mentioned that they were able to apply the learning (concepts, ideas, or theories) to their own context. Four participants stated that ADDIE (Analyze, Design, Develop, Implement, Evaluate) was a helpful model for them to use when developing their courses. Others mentioned specific concepts that were areas of interest for them, including teaching large classes and making learning relevant to students. The following quote illustrates the theme:

> Thinking about Bloom's Taxonomy has percolated through my head for a long time, but [the workshop] made me sit down and think about it more, and change some of my activities and to some extent some of my assessments, to match the kind of learning I was hoping for from Bloom's. To realign things, thinking about Bloom's Taxonomy (P6, first interview).

The theme of applying the learning to participants' own contexts remained relatively strong over time. Although not all participants talked about it during the second interview, eight of the 11 mentioned using some of the concepts or ideas from the workshop in redesigning or teaching their course. One participant stated:

> I had no idea what I would do before. And I now feel like I have something to ground me. Something to base what I'm going to be doing on; I can refer to the ADDIE model. It's provided me with a structure, a scaffolding (P11, second interview).

Thus, another way in which participants showed a deep approach to learning was by applying concepts and ideas from the workshop to their own courses. Two of the open-ended survey

question responses supported the idea that participants applied the learning to their own context. One respondent stated, “Perspectives from people of other faculties allow me to make connections and understand differences in my own discipline” (P9). Participants found it helpful to hear about how other people manage aspects of their courses, even those who were from different fields, as it sparked ideas about how they might do something similar in their own course. A couple of participants noted that even though some of the discussion topics were not immediately relevant to them, such as teaching large-enrollment courses, they still found it interesting to hear how other people handled them in case they ever have to teach a large-enrolment course themselves.

Desire to excel or improve.

Seven participants indicated a desire to excel or improve at some point during the interviews. In their discussion, it was clear that they wanted to improve their courses, further their understanding of concepts, or gain more ideas to make their courses a better learning experience for students. Participants expressed an interest in improving the course to reach more learners, becoming better teachers, and incorporating more activities into the design. The desire to improve was illustrated in the follow quote: “That’s what I really wanted to focus on, is applying the new knowledge or new concepts and information directly, immediately, so I’m really trying to take it to a higher level of evaluating, creating, and designing my course” (P11, second interview).

Interestingly, the number of participants’ comments relating to a desire to excel or improve increased from the first to the second interviews, though the number of participants expressing a desire to improve remained the same. Comments in the second interview also demonstrated the same amount of intensity; they did not diminish or lessen in strength.

Participants mentioned the need to learn more, make their courses even better, and explore what it meant to offer a high quality course. This desire to excel or improve was one indicator of a deep approach to learning in the workshop.

There was little support for this theme from the open-ended survey responses. A few of the responses hinted at a desire to excel without explicitly stating so. One participant stated, "I felt I was helping other people develop and improve their course. I want to know how things go later and be able to discuss how things go for me" (P24).

Making connections.

Another way in which participants took a deep approach to learning in the course design workshop was by making connections. Some of the ways in which participants made connections included connections between new ideas and prior learning, connections between their own course and other participants' courses, connections between their own discipline and other disciplines, and connections between designing courses and other types of planning. Participants recounted ways in which they made connections in both the first and second interviews, indicating that this aspect of a deep approach to learning remained strong over time.

In this quote, a participant compared his or her own course to that of another instructor: "It made me think, do I have the same challenges as he has or does he have different challenges? ...The in-class discussions showed the commonalities that, regardless of your discipline, all instructors face" (P10, first interview). Another participant remarked with a bit of surprise that his or her course was not so different from other courses, though they were from different disciplines; instructors faced similar challenges regardless of their field of study. Two participants stated that they applied skills learned in the workshop to other areas of planning. For

example, a participant used the criteria for writing course outcomes to do goal planning, making the goals specific, clear, and measurable.

Data from the surveys did not indicate that participants made connections between courses, disciplines, and concepts learned in the workshop. There were no comments in the open-ended survey question responses that supported the theme of making connections.

Reflection.

Six of the 11 interview participants mentioned that reflection was an important part of the learning process for them. Spending time on sustained thought on their course allowed them to digest issues and generate strategies. Participants emphasized reflection in both the first and second interviews; however, they identified the online learning environment more often than the face-to-face environment as facilitating reflection. This is illustrated in the following quote:

> Online, it kind of gives you time; it's documented so I can always refer back. And of course the online part gives space and time to elaborate your thoughts… You cannot think promptly on course design in the class (P9, first interview).

The face-to-face learning environment was clearly still important for some participants in fostering reflection:

> It was practical... just being able to think it through ourselves, instead of just having the workshop where they tell us what to do, and then at night you go home and you can't remember what the steps are. So, it was nice, having that minute to pause, and to actually write something down or think through something before moving on to the next (P12, first interview).

Reflection afforded participants the chance to puzzle through aspects of their course, think about the feedback they'd received, and what they wanted to do with their course in future. They demonstrated a deep approach to learning through reflective activities.

Five comments on the open-ended survey suggested that reflection was an important element in their learning. All of the comments noted that the online activities were primarily associated with reflection, as opposed to face-to-face activities. The online activities gave them time to think about other people's comments, reflect on in-class activities, and even search for additional resources, which furthered the discussion. Since face-to-face activities were planned in advance, with time allotments for each one, they did not necessarily allow for participants to reflect fully while in the sessions. The online activities helped to meet that need.

Sense of satisfaction or confidence.

Another way in which participants demonstrated a deep approach to learning was through a sense of satisfaction or confidence in their learning in the workshop or the results of changes they made to their courses. Approximately half of the interview participants remarked that they were either satisfied with the course they designed, or felt more confident in their competence in designing a good course. This theme seemed to strengthen over time as two more participants mentioned being more confident or satisfied during the second interview as compared with the first. This quote captures one participant's thoughts:

> It took time to find an answer to everything, but I was able to use all the resources they gave us to make sure I had answers for everything, and feel positive about the outline that I made. I feel pretty good about it (P12, first interview)!

The sense of satisfaction or confidence illustrated in the quote is evidence of a deep approach to learning. However, there was little evidence to support this theme in the open-ended survey responses.

Surface Approach to Learning

The second research question asked, "In what ways do workshop participants take a surface approach to learning in a blended faculty development workshop?" The interview data showed less evidence of a surface approach to learning. However, three different themes emerged from participant interviews: low participation, barely meeting requirements, and forgetting quickly.

Low participation.

One way in which participants demonstrated a surface approach to learning was through low participation in some of the workshop activities. While they worked hard at completing certain tasks, such as writing their course outcomes, they did not show uniform enthusiasm for all tasks, even the ones that were required in order to receive a certificate of completion. Eight of the 11 interview participants displayed a deep approach to learning in some of the workshop activities, and a surface approach in others. The participant's role (faculty, graduate student, or staff) did not seem to have an effect on whether they took a deep or surface approach to certain tasks.

The most commonly identified activity in which participants stated they took a surface approach to learning was the online discussions. These discussions took place in between the face-to-face sessions, which were scheduled one day per week for three consecutive weeks. Typical online activities required participants to post one component of their course design, such as their course outcomes, and to offer feedback to others on their outcomes. The following

statement was representative of interview participants' comments regarding participating in the online discussions: "I did not participate online as much as I could have... I did not have the time in these three weeks to actually do a lot on there" (P14, first interview). Another participant noted that interaction was a secondary goal to completing the homework: "From what I observed there wasn't a great deal of online back and forth. I think people were relieved if they got their stuff up on time" (P28, first interview). For the interview participants who identified online discussions as an area of the workshop where they did not put in enough effort, they uniformly stated that it was a lack of time, not a lack of interest that held them back from participating more frequently.

Open-ended survey question responses also showed that some participants did not participate fully in all aspects of the workshop. Survey data identified the online discussions as the main activity in which people did not participate to a full extent. Five respondents said they participated minimally, if at all. The reasons given for low participation were a lack of time, not enough time between face-to-face sessions, and not knowing how to use the online discussion board tool. The most common reason given for not participating online though was lack of time.

Barely met requirements.

Documentation submitted to me by the participants included items such as their course plan, with course learning outcomes, the student assessment plan, and planned teaching and learning activities. None of the participants stated that they had taken a surface approach to generating their course plan. Yet, three participants completed their plans much less thoroughly than others, suggesting that some took a more surface approach to this task.

Comments on the open-ended survey questions illustrate this theme well. One survey participant stated that he or she posted to the discussion board in order to complete the

homework but did not really contribute in other ways, such as offering feedback to other participants or even reading their posts. Another survey participant said that he or she, like other participants, posted to the discussion board in a way that did not contribute to the goals of the workshop. For some participants, it would seem that they completed the work required to receive the workshop certificate, without putting much effort or thought into the task of posting to the online discussion board.

Forgot quickly.

A third way in which some interview participants appeared to demonstrate a surface approach to learning was by quickly forgetting what they learned in the workshop. Most people forgot some details, which is to be expected, especially in the second interview as it occurred four to six months after the end of the workshop. Two participants, though, either couldn't remember essential concepts from the workshop, or stated in the first interview that they quickly forgot some things. As one participant stated, "It's hard to know what I've already sort of absorbed and what I've forgotten... but – that's all I can think of for now"` (P7, first interview). It is possible that there are other reasons that participants retained concepts for only a short time, though, such as a lack of time to learn them. Comments on the open-ended survey questions did not specifically mention that participants quickly forgot concepts from the workshop.

Face-to-Face Learning Community and Approach

The third research question asked, "How does the role of the face-to-face learning community affect the approach that participants take to the workshop?" The interview and open-ended survey question data strongly suggested that the face-to-face learning community tends to encourage participants to take a deep approach to learning. Through discussions, brainstorming activities, and giving and receiving feedback, participants created a learning community that was

rich and supportive. However, a small number of interview and survey participants said that some people dominated the in-class discussions, making it challenging for them to participate fully. The following five themes speak to the role of community in the approach taken by participants in the face-to-face learning environment: clarified or reinforced concepts, generated ideas, felt a connection, felt inspired, and discouraged involvement.

Clarified or reinforced concepts.

The face-to-face learning community facilitated participants' deep approach to learning by helping to reinforce concepts from the workshop. Five of the interview participants spoke of discussions that helped to clarify things for them:

> I found the discussions, whether it was just one person speaking, the whole class listening, or the group sessions that we had, those were very valuable. You're participating more directly, and I think it really helps to pick up on the concepts (P11, first interview).

Two participants commented that being able to see how others wrote their learning outcomes, structured their student assessments, and completed other tasks relating to course design provided good examples for them to follow and thus contributed to their understanding of the concepts.

> It gave me a different level of experience, just hearing what senior professors and people who are used to planning their own courses do – and then people like me who didn't know how to begin planning a course – having that breadth in the room helped give different insights (P12, first interview).

One participant noted that although she probably could have learned the workshop concepts from reading the manual, discussing them in the sessions made the learning richer. Most of the comments about clarifying or reinforcing concepts came from the first interview.

Six responses to the open-ended survey questions supported the theme of clarifying or reinforcing concepts. Survey participants thought that the face-to-face environment was a more effective means of clarifying understanding than the online: "Online gives you the freedom to work with your time constraints and still be able to complete the work, and face-to-face allows for clarification regarding questions you may have, and hear your peers' questions and experiences" (P8). Two participants mentioned that getting responses and feedback immediately was beneficial to their learning; therefore, the face-to-face learning community was better at clarifying or reinforcing concepts.

Generated ideas.

Eight of the interview participants said that face-to-face interaction assisted them in generating ideas for their course design. Four of them identified brainstorming activities as being particularly helpful in generating ideas:

> People were very helpful. And they were very open-minded to what I was presenting and a lot of their suggestions I've incorporated. I think that created an atmosphere over the three weeks of camaraderie and it allowed for trust with your ideas. Because when you're creating it's not about failure, it's about trying something and so you're thinking aloud, you're brainstorming. You have to feel some sense of safeness in presenting ideas and not to be judged or criticised (P12, first interview).

Others stated that by answering other participants' questions, they were able to articulate a rationale for their decisions and identify aspects of their courses that could be improved. Two of

the interview participants stated that it was helpful to see examples of other people's course design plans when they were not certain how to proceed or wanted to see how other people were approaching a design task such as writing course outcomes.

According to four of the interview participants, diversity was useful in generating ideas as people from different disciplines, as well as those who held different roles, were able to come up with suggestions and strategies that would not have occurred to them otherwise. The following quote illustrates this example:

> A lot of the feedback I got from the other people in the workshop was more about pedagogy. They kind of raised the idea of maybe instead of concentrating on the negative and how we can punish someone, we concentrate more on the reward. And that was interesting for me because I wouldn't have gotten that kind of outside perspective, that different way of looking at it, other than attending the course... And it surprised me that we were kind of blinded by that negative view that it hadn't occurred to us within the committee or my academic advisor or myself to think about it in that different way (P19, first interview).

Another participant stated that he or she did not always adopt the suggestions that were offered. By discussing what was unique about the course or specific to his or her discipline, it forced him or her to consider what the best approach might be in that course. The process of generating ideas, discussing them, and deciding on what might be most effective was enriching.

Three of the 11 interview participants noted that the group prompted or challenged them to go further in their thinking. When discussing their courses, participants would question each other about assumptions they were making about students in their course, the meaning of terms, and intended goals of the course they were designing. One participant stated that he or she did

not typically have this sort of discussion with people in the same discipline, because it was assumed by both that they were on the same page in terms of their thinking. By discussing the course with people from other faculties, the participant was reminded to examine his or her assumptions and to be intentional about the learning goals for the course. The following quote illustrates how group interaction prompted participants to extend their thinking:

> Everyone just seemed very open and interested in hearing each other's perspectives, and making sure everyone had a chance to think through other people's problems. If I was confused, I knew I could ask anybody and they would help out. It was also nice because they would challenge you to push a bit further with things (P12, first interview).

It is clear that the face-to-face learning community was instrumental in adding richness and generating ideas for participants to use in their course design.

Three comments from the open-ended survey questions support the theme of generating ideas. Participants stated that the face-to-face learning community helped them to come up with strategies and ideas, even if they were from different disciplines. Discussions gave the participants practical examples of teaching and learning activities, and generated more ideas than they would have thought of on their own.

Felt a connection.

The face-to-face learning community prompted participants to take a deep approach to learning when participants felt connections to one another. Nine of the 11 interview participants and three out of 34 survey respondents stated that they felt a bond or connection with others in some way, such as grappling with common course design issues, providing confirmation of their course plans, or sharing ideas and learning from one another. For example, one participant described a conversation as follows:

> She would say, how are my course objectives looking? And I would say, well I don't see anything in here that needs changing. So it wasn't any fundamental changes but just that feedback, just that little connection kind of helped. Those little pep talks (P41, first interview).

Feeling a sense of connection with others in the workshop seemed to benefit the participants in several ways. When they felt comfortable with one another, they were open to suggestions and new ideas and were more willing to offer them to others. As in the quote above, the participants offered each other support and confirmation that they were on the right track with their course plans. Other participants mentioned that they felt like they were treated with care and that their ideas were taken seriously by others, including those with more teaching experience. Two interview participants mentioned that they felt a connection to people in other disciplines, which surprised them. They had originally thought they would not have anything in common with people from vastly different disciplines. They also felt a sense of connection to others when sharing feedback and ideas, since they were able to learn from each other. Thus, feeling connected to others in the workshop helped to promote a deep approach to learning in workshop participants.

Felt inspired.

Another theme that emerged from the interview data was how the face-to-face learning community inspired participants to do their best work, in a variety of ways. One participant mentioned that the group had a positive attitude that was infectious:

> They're being creative in the design process, so some of the ideas that people were talking about, I was actually wowed by what they were doing. I felt inspired by them because they were being really creative, and who knows what new innovations will come

> for teaching and learning from these people. They were all so positive about being there, you can't help but think the same (P12, first interview).

From the interview, two participants stated that they felt reassured when peers confirmed that their work was solid and on the right track. The face-to-face learning community encouraged and motivated them to do good work. It also gave confidence to some participants, which in turn tended to promote a deep approach to learning. Several of the participants were relatively new to teaching, while two had never taught in higher education before; two were in a slightly different role, such as teaching the lab component of a course rather than the entire course. Being able to discuss topics related to course design in a group setting showed them that they had good ideas to contribute and strengths to draw upon:

> It wasn't as important if you were a tenured faculty member or had a PhD or not, and even that age divide – I was probably the youngest person in the course. But I felt that I could learn from some of the older members of the course, but they really did seem to be listening to my ideas too. I felt that my experience working with students was validated. It was seen as valuable (P27, first interview).

There was little evidence in the open-ended survey question responses to support the idea that participants were inspired by others, in either the face-to-face or online learning environment. None of the responses related specifically to the theme of inspiring participants to do good work.

Discouraged involvement.

Two survey participants and one interview participant stated that the in-class discussions were sometimes dominated by certain individuals, making it hard for everyone to contribute. A

lower level of participation in discussions and activities aligns with a surface approach to learning. An interview participant stated:

> At some points some participants were too loud. Even before the instructors were done they began talking. Almost taking over the whole thing. It was almost like the other voices were being drowned out. You know, we also have stuff to say and it's not all about your discipline... I just feel like, oh come on, can you just let other people speak (P41, first interview).

This participant was able to compensate through online discussions, where he or she could take all the time needed to put forth his or her issues and think them through. Since the other two participants who mentioned that they were discouraged from in-class involvement in discussions were survey respondents, is not known if they found strategies to contribute, or if they felt the struggle was not worth it.

Online Learning Community and Approach

The fourth research question asked how the role of the online learning community affected the approach that participants took to the workshop. In a blended program, the online environment seemed to have less influence on approach than the face-to-face learning environment as some participants simply did not participate online. The majority of interviewees did participate online, however, and participation tended to promote a deep approach to learning. Five themes emerged relating to how the role of the online learning community affected the learning approach: generated ideas, promoted critical thinking, promoted reflection, encouraged equitable participation, and impacted on face-to-face learning.

Generated ideas.

As in the face-to-face learning environment, interview participants stated that the online learning environment was helpful in generating ideas for their courses. Six of the 11 interview participants mentioned that the online learning community helped them to generate ideas or strategies. As one interview participant explained,

> I did use [Blackboard ™] for seeing how people organize their concept map or how they were writing their course outcomes. And I found that helped me to get started or helped me to expand on what I was already thinking about (P27, first interview).

Other interview participants noted that having the chance to review people's work without time constraints allowed them to go into more detail when providing feedback. It allowed them to compare their own course with that of others, getting ideas and practical examples of course designs. The online learning environment was also helpful in seeing examples by people who were in different groups, unlike the face-to-face environment in which they were split into smaller groups and missed out on some discussions.

The survey data supported the idea that the online learning community assisted in generating ideas and gaining new perspectives, with seven of the 34 respondents mentioning it in their open-ended responses. As one respondent noted, it "helped to review/explore other points of view. Liked the feedback, online more concrete and specific" (P30). Participants noted that they commented on other people's work and integrated the feedback they received. Two participants stated that the online feedback was more specific than what they received in the face-to-face learning environment. Thus, online conversations helped participants to generate ideas for their courses.

Promoted critical thinking.

Interview participants noted several ways in which the online learning community prompted them to think critically about their course design. Having more time to think through facets of a course allowed for a more in-depth approach to issues and concerns.

> Most of the questions were, tell me more about this interesting topic, because I found people were interested in it. So that made me think, this is going to be part of how I have to explain it in future to students. It helped me refine my thinking or perhaps change how I would do it (P11, first interview).

One participant noted that the online environment allowed more time to offer feedback than the face-to-face classroom, which resulted in a greater amount of feedback online. Another participant stated that it was helpful when others mentioned what was vague or confusing to them, which pointed to the need for revisions.

Another way in which the online learning community promoted critical thinking, and therefore a deep approach to learning, was due to the somewhat permanent nature of the online discussion board. Three interview participants said they either wanted to do a good job on giving others feedback or did not want to appear as if they were weak on the workshop concepts. Thus, they put a lot of time and effort into giving feedback to others. They knew that people might refer to the written notes multiple times and that everyone would be able to read the messages, so they wanted to give thoughtful, salient feedback.

> You need to be able to say something about someone else's [work], so you think critically. You get to do the exercise three times over as opposed to just doing it once for yourself. I made notes on what they wrote before I commented on it because I wanted to make sure I understood what they were doing (P12, first interview).

As the participant noted above, offering each other feedback also reinforced concepts when they gained practice by completed the activity more than once.

Comments from the open-ended survey questions supported the theme of critical thinking in the online environment:

> I think it's great for learners who like to think about/ research a topic before they respond so when a face-to-face discussion might be intimidating the online activities let them work through their discussion on their own time and respond when they feel prepared (P10).

One survey respondent stated that seeing other people's work and receiving feedback and ideas on their own work led to improvements. Another respondent stated he or she learned how to critique a course plan in the online learning environment, evidence of critical thinking in the online learning environment.

Analysis of the online asynchronous discussions supported the theme of the online community fostering critical thinking skills. Cognitive presence was evident throughout the discussions, with all phases of inquiry demonstrated in the forums. Almost one quarter (23.4%) of the frequency counts were classified within the first phase, triggering event. The second phase, exploration, accounted for 42.3% of the frequency counts. Integration, the third phase, accounted for 28.1% of the frequency counts, while resolution/application accounted for 6.3%. Because this workshop was blended in format, one possibility was that the triggering event and resolution/application phases were addressed in the face-to-face part of the workshop.

Promoted reflection.

Interview participants stated that the online learning community was particularly good at promoting reflection, which in turn tended to facilitate a deep approach to learning. Since

participants could take as much time as they wanted, reading through comments and comparing their course to others, it was easier to reflect than in a face-to-face environment. As one participant stated, “If I’m one of those participants who doesn’t take notes, then I would have the comments documented so I can always refer to them. And of course the online part gives space and time to elaborate your thoughts” (P9, first interview). Another participant stated that there was not always sufficient time in class for thorough feedback, whereas the online learning environment gave them time to examine other people’s work and offer more thoughtful comments and ideas.

Comments on the open-ended survey questions showed that the online learning environment was beneficial for promoting reflection. As one respondent noted, “Online activities are an opportunity to have feedback before face-to-face activities. That feedback helps in personal reflection on tasks” (P41). Two survey respondents stated that the online activities extended the in-class activities or furthered the discussion. Two respondents said they received more feedback online than they did in the face-to-face classroom, and three said that they had more time to reflect or think about their work in the online learning environment. Thus, both the interview and survey data support the theme of the online learning environment promoting reflection.

Encouraged equitable participation.

The online learning community promoted a deep approach to learning by allowing everybody the opportunity to be heard. Three participants stated that it was challenging for them to be able to speak at times in the face-to-face classroom. Conversations online allowed everyone the same opportunity to be heard and mitigated the possibility of a couple of individuals dominating the discussion:

> The online discussion board helped to even things out a bit because in that case there's only so much you can say in writing, right? The online discussion diffuses the tension that builds up in class. It's harder in writing to be overbearing, but in class I think that's what it is (P41, first interview).

Thus, the online community allows all participants the chance to discuss issues that are important to them, which can be challenging in the face-to-face classroom.

Open-ended survey question responses supported this theme. Two of 34 respondents stated that the online discussion board gave them equal opportunity to participate and discuss the topics of interest to them. In that way, the online learning environment made up for inadequacies in the face-to-face environment.

Impacted on face-to-face learning.

Participants noted two ways in which the online learning community had a positive impact on face-to-face interactions: by promoting completion of work and by encouraging richer in-class discussions. First of all, the online learning community prompted participants to do the required out-of-class work. A participant pointed out that "the online discussions were important, partly in the sense that they made sure everybody did their homework, which is useful. The workshop becomes less useful if people haven't done their homework because there's not that much to discuss" (P6, first interview). Thus, the online discussions encouraged participants to come to class prepared to discuss and contribute.

The second way in which the online learning community had a positive impact on face-to-face interactions was by continuing the momentum started in class, which extended conversations and made them richer. One interview participant explained it as follows:

> The online discussion really helped because people could actually comment on other people's course objectives or assessment techniques. People actually said, "that was confusing to me" or "that didn't appear very clear." So it helped me to rethink one of my course objectives. So [in the workshop] I explained what I really meant. Together the four of us talked around and around and offered ideas until I came up with a sentence that everybody liked, so I changed it (P41, first interview).

The online discussions therefore impacted in-class conversations, extending them and making them more meaningful. Another interview participant stated that the online discussions kept the conversation going, so they did not need to summarize or start again when they met face-to-face, but rather, they were able to make more progress.

Open-ended survey question responses supported the theme that the online discussions had an impact on face-to-face learning. Six respondents noted that online discussions extended conversations and opened up new ones for further exploration in class. According to one participant, "We use online discussions to further the in-class conversations or to raise new ideas that can generate subsequent face to face discussions" (P38). One survey respondent stated that the online discussions helped to prepare him or her for topics or issues that arose in subsequent face-to-face sessions. Another said that the online discussions helped to maintain connectivity with other participants and keep the energy level high throughout the week. The online activities reportedly had a positive impact on in-class learning, for those who decided to complete them.

The data suggested that the online learning community encouraged some participants to take a deep approach to learning by helping them generate ideas, promote critical thinking and reflection, extend discussions, encouraging equitable participation, and make face-to-face discussions richer.

Impact of Community on Learning Approach

The fifth research question, "What is the relationship between the Community of Inquiry model and the effects of the learning communities on learning approach taken by participants in the workshop?" is complex and draws upon data from the previous questions. In most ways, the interview and survey data showed that the learning community tended to promote a deep approach to learning in the workshop, in both the face-to-face and online learning environments.

In the face-to-face environment, the learning community tended to facilitate a deep approach to learning in several ways: by clarifying concepts that were confusing or reinforcing them, generating ideas, strategies, and suggestions, forming feelings of connection between participants, and inspiring participants to want to do their best work. Clarifying or reinforcing concepts related most to teaching presence. Generating ideas and strategies related to both teaching presence and cognitive presence. Social and teaching presences were involved in inspiring people to do their best work; the intersection of these two areas was known as setting climate (Garrison, Anderson & Archer, 2000). Feeling connected to others related to all of the presences. Figure 4.1 illustrates how the themes from the face-to-face learning environment mapped to the CoI model.

For a minority of people, one aspect of the face-to-face learning community may have encouraged a surface approach to learning. One interview participant and two survey participants stated that there were people in their workshop who dominated the conversations, making it difficult for others to bring up issues of importance to them. It is possible that limited involvement in discussions promoted a surface approach to learning for the participants. The theme of being discouraged from involvement in discussions is located on Figure 4.1 as well.

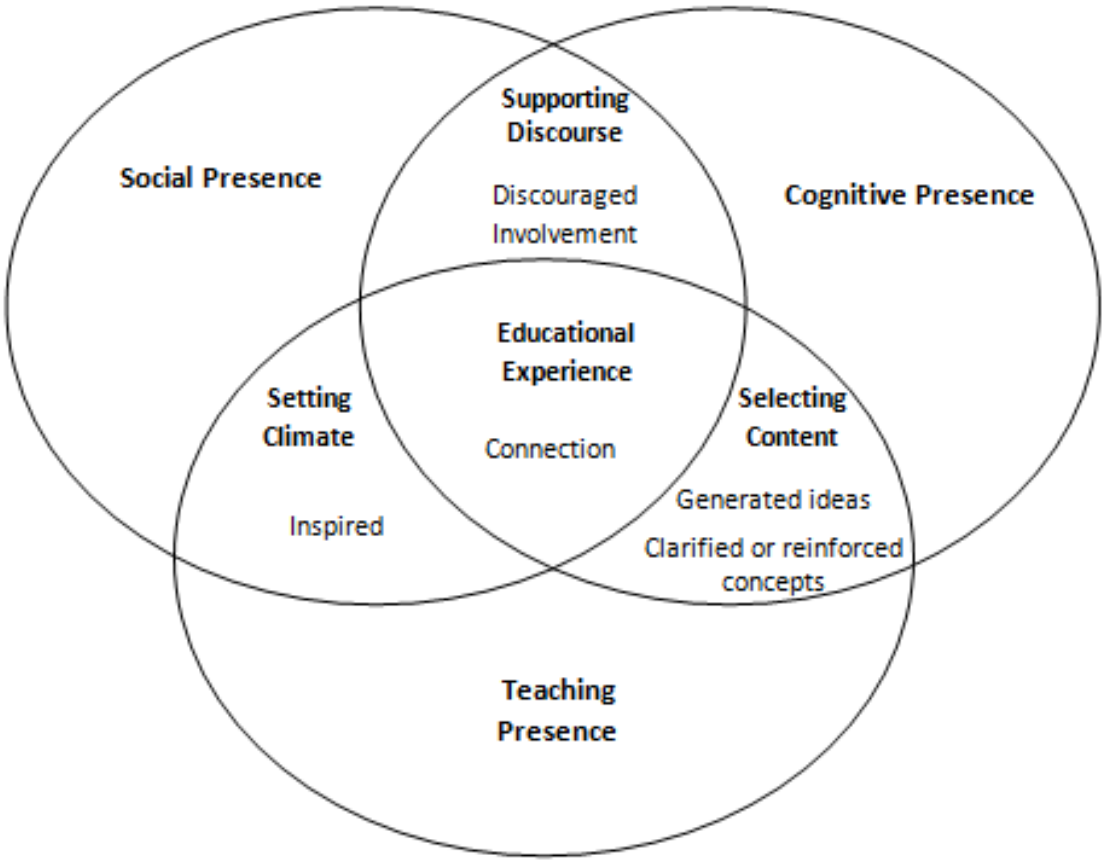

Figure 4.1: Face-to-face themes as they relate to the Community of Inquiry model
Source: Garrison et al., 2000. Used with permission.

Figure 4.1 shows that social, cognitive, and teaching presences were all reflected in the face-to-face learning environment, and all of them played a role in encouraging a deep approach to learning in workshop participants. Since social, cognitive, and teaching presences were all represented, it suggested that the face-to-face learning community supported a deep approach to learning in a broad, comprehensive way. It is interesting to note that all four of the themes related to a deep approach to learning in the face-to-face environment corresponded to teaching presence in some way, which was more than social presence (two themes) and cognitive

presence (three themes). The theme that could have potentially led to a surface approach to learning, discouraged participation, related to supporting discourse, the intersection of social and cognitive presences.

The online learning community also tended to facilitate a deep approach to learning for those who chose to do the activities. The online community helped participants to generate ideas, promoted critical thinking and reflection, allowed for equitable participation by everyone, and positively impacted on the face-to-face classroom. However, not all participants chose to participate online. It is easier to ignore your peers online than it is in the face-to-face classroom: online, one simply does not bother to access the discussions. Figure 4.2 illustrates how the themes from the online learning environment relate to the Community of Inquiry model.

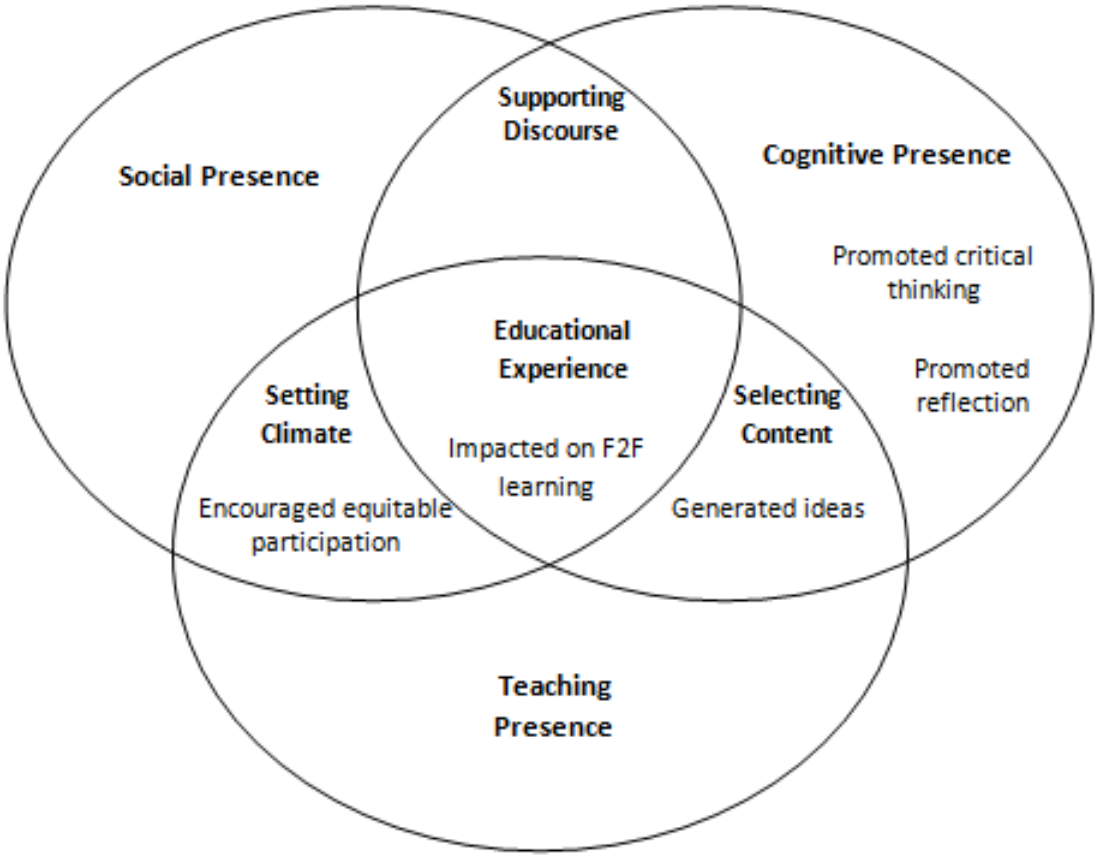

Figure 4.2: Online themes as they relate to the Community of Inquiry model
Source: Garrison et al., 2000. Used with permission.

Figure 4.2 indicates that social, cognitive, and teaching presences were also reflected in the online learning environment, and all three played a role in encouraging a deep approach to learning in workshop participants. Results suggested that, like the face-to-face learning community, the online learning community supported a deep approach to learning in a comprehensive way. Figure 4.2 suggested that the online learning community was particularly helpful in facilitating cognitive presence for participants in the workshop, with four out of the

five themes represented within the cognitive sphere. Two of the five themes related to social presence, and three of the themes related to teaching presence.

Cross tabulation of Likert-scale survey questions resulted in a query of statistical significance, presented in Table 4.11. Most (85.3%) participants disagreed with the statement, 'I feel that this workshop results in only modest learning,' which means that 85.3% believed the workshop resulted in more than modest learning. Most of these participants (82.8%) also indicated that they felt comfortable disagreeing with other participants while still maintaining a sense of trust. Of the participants who agreed with the statement, 'I feel that this workshop results in only modest learning,' two participants (40.0%) indicated they felt comfortable disagreeing with other participants while maintaining a sense of trust, and three (60%) were not sure. Therefore, it is possible that there is a relationship between level of learning and being able to disagree with others while maintaining a sense of trust.

Table 4.11. Disagreeing While Maintaining Trust by Only Modest Learning

'I Felt Comfortable Disagreeing With Other Participants While Still Maintaining a Sense of Trust' by 'I feel That This Workshop Results in Only Modest Learning'

		I feel that this workshop results in only modest learning.			
		SA + A	**Neutral**	**SD + D**	**Fisher Exact P**
I felt comfortable disagreeing with other participants while still maintaining a sense of trust.	**SA + A**	2 (40.0%)	0 (0.0%)	24 (82.8)	.046*
	Not sure	3 (60.0%)	0 (0.0%)	3 (10.3%)	
	SD + D	0 (0.0%)	0 (0.0%)	2 (6.9%)	

*Sig at 0.05 level

Summary

This chapter has reported the findings from the data collected as they relate to the five research questions. Descriptive statistics illustrated that participants generally took a deep approach to learning; interview and survey data suggested that participants took a deep approach to learning in the workshop. Themes that emerged from interviews and surveys to illustrate a deep approach to learning are as follows: considerable learning, highly interested or engaged in the learning process, apply to own context, desire to excel or improve, making connections, reflection, and sense of satisfaction or confidence. Interview and survey data also showed that participants sometimes took a surface approach to learning in the workshop, through low participation, barely meeting requirements with certain tasks, and forgetting concepts quickly.

Community of Inquiry Survey results show that there was a strong teaching presence in the workshop. Participants indicated that they felt there was more social and cognitive presence in the face-to-face classroom than the online learning environment.

Four themes emerged from the interview and survey data showing how the face-to-face learning community facilitated a deep approach to learning in the workshop: clarifying or reinforcing concepts, generating ideas, feeling connected, and inspiring others. It is possible that the learning community promoted a surface approach to learning for some participants, by limiting their involvement in discussions.

Five themes emerged from the interview and survey data that illustrate how the online learning community facilitated a deep approach to learning in the workshop: by helping to generate ideas, promoting critical thinking, promoting reflection, encouraging equitable participation, and by impacting on face-to-face learning.

Chapter five will discuss these findings in relation to the existing literature, as well as providing implications for practice and future research.

CHAPTER FIVE: DISCUSSION AND IMPLICATIONS

Introduction

In this chapter I discuss the findings of the study in relation to the research questions. First, the results are examined in relation to the literature on deep and surface approaches to learning. Next, the effects of the community in relation to the learning approach are addressed. The chapter concludes with implications for practice.

Deep Approach to Learning

The first research question of the study asked how participants in a faculty development workshop took a deep approach to learning. The research findings reported in Chapter Four suggested seven themes relating to a deep approach to learning in the workshop: considerable learning, highly interested or engaged in the learning process, application to own context, desire to excel or improve, making connections, reflection, and a sense of satisfaction or confidence.

Considerable learning.

Eight out of 11 of the interview participants and six out of 34 survey respondents stated that they experienced substantial learning in the course design workshop. Four to six months later, interview participants recalled aspects of the workshop that had made an impact or that they used in their teaching. One participant said,

> Around evaluation, the facilitators both spoke about weaving evaluation through the entire course and how some of it was summative and some formative. I think that was something I didn't know anything about before and the concept seemed really effective in helping the instructor know where the students were at in the course (P27, second interview).

It is clear that the discussions and activities they had in the workshop resulted in an impactful learning experience in which some of the learning endured over a span of time.

It has been generally assumed that a deep approach is preferable to a surface approach, though there is a lack of research with the model and results of learning (Howie & Bagnall, 2012). Howie and Bagnall (2012) alleged that the language used in the deep and surface learning model is value-laden, implying rather simplistically that deep is good while surface is bad. Therefore, it has been assumed that

> a deep approach to learning will be reflected in a student having a better educational outcome than would be the case had they used a surface approach to learning, and that a surface approach to learning will be reflected in a student having a poorer educational outcome than would have been the case had they used a deep approach to learning (Howie & Bagnall, 2012, p. 6).

Thus, while I assumed that considerable learning was indicative to a deep approach, more research needs to be done to establish a solid link between the two.

My research indicated that a deep approach to learning was adopted by the participants, especially in the online learning environment. Participants who took a surface approach to learning with the online discussions and activities simply did not access the online materials. Since they did not engage in the online activities, they did not have the same opportunity to learn from those tasks as compared to participants who fully engaged with them. In their study, Trigwell and Prosser (1991) found a positive relationship between a deep approach to learning and learning outcomes. Phas (2008) also acknowledged a link between mastery learning goals and a deep approach to learning. Thus, the results from my study are aligned with much of the research in the field.

Highly interested or engaged.

Seven of the 11 interview participants indicated a high level of interest or engagement in learning in the workshop, and five of the open-ended questions on the survey related directly to interest or engagement. Participants expressed interest or engagement in activities such as group discussions, getting feedback from colleagues, and delving into issues of personal interest. They demonstrated a continued interest by further researching workshop concepts, and continuing conversations with others about topics related to course design. One interview participant stated,

> I remember talking about [the workshop] a whole lot to other grad students and letting them know it's a really good course, and XXXX just took it a couple weeks ago. He said he really loved it so we got together and talked about it a bit, and the experience (P12, second interview).

That participants were interested or engaged in the learning process is not surprising. Since the workshop was optional, people registered for it because they were interested in learning about course design. They may drop out at any time without consequence, and the only external reward for finishing the workshop is a certificate of completion.

Research has shown that motivation to learn is one of the personal factors that encourages a deep approach to learning (Baeten et al., 2008). Kember et al. (2008) found that students who took a deep approach to learning were ones who tended not to dislike a course. If they disliked a course, they were more likely to use a surface approach to learning. Thus, having an interest in the learning tended to discourage a surface approach. From my research findings, most participants showed a deep approach by being interested or engaged in the learning which was consistent with much of the literature.

The literature is not in complete agreement on motivation and deep approach to learning. It is possible for highly motivated students to adopt surface strategies, though students may be using an achieving approach to maximize grades (Kember & Gow, 1991). In my own research, one participant mentioned learning from others in a way that was invisible to anyone else. The participant accessed the online forums, examining other people's assignments for ideas and reading over feedback and strategies without ever responding to a post. There was no noticeable evidence of learning, and yet, it was possible that the participant was just as engaged as others, and potentially learned as much as other participants. This participant's experience makes one wonder if demonstrable interest or engagement is necessarily an indicator of a deep approach to learning.

Apply to own context.

All 11 of the interview participants and three out of 34 survey respondents were able to apply new concepts, ideas, or theories to their own context. Four mentioned that the ADDIE model was helpful when designing a course; others found that they were able to incorporate ideas from discussions on topics such as large enrollment courses or how to engage students in the classroom. As one survey respondent noted, "I like seeing the work online that my colleagues produce – gives me new ideas about how to apply ideas from the face-to-face environment. Also, reading everyone's feedback helps me to learn" (P3).

The ability to apply new learning to one's own context was considered to be a characteristic of a deep approach to learning. In order to apply new concepts or ideas, the learner needed to do more than memorize facts, which would be indicative of a surface approach; he or she must use critical thinking skills to contextualize the concepts in a different way. During the second interview, a participant stated,

> I've applied those skills in several different contexts since that workshop. It was useful to me in terms of not just learning objectives but also different kinds of goal planning. Of making that clear and measurable, those kinds of things that we discussed, so I find that still very relevant and useful in different areas of my career and life (P19, second interview).

Studies have shown that learners who took a deep approach to learning were focused on comprehension, not reproduction of knowledge (Marton & Saljo, 1976a; Entwistle, 2001). Therefore, the finding that participants demonstrated a deep approach by applying new learning to their own context was consistent with the literature.

Desire to excel or improve.

Seven of the 11 interview participants noted a desire to excel or improve at preparing good courses. This particular theme remained strong over time, indicating a sustained desire to create effective learning experiences for students. Other participants indicated that they wanted to make their courses more engaging, prepare better assessments, and make their course more relevant to learners.

As noted in the literature, the desire to excel may be indicative of either a deep or an achieving approach to learning. Intrinsic motivation and a desire to do well were characteristic of a deep approach (Biggs & Tang, 2011; Entwistle & Tait, 1990). With an achieving approach, learners are motivated to maximize grades, adopting either a deep or a surface approach to do so. However, participants of the workshop did not receive grades for any of their work, only feedback. Therefore, it seemed unlikely that they would take an achieving approach in the workshop.

Like the findings in my study, some studies link intrinsic motivation and a deep approach to learning. Therefore, the finding of a desire to excel or improve was aligned with prior research and indicative of a deep approach to learning. In a follow-up interview conducted several months after the end of the workshop, a participant in my study demonstrated an attitude of continuous improvement, similar to mastery learning:

> I'll definitely be building off of it because there was just so much great information. But it definitely seems more like a career kind of thing. Just keep working at it and adjusting things so that they work for you. The booklet [workshop manual] is sitting right here so I can just flip through it (P12, second interview).

Lau, Liem, and Nie (2008) found that students who favored mastery learning tended to devote a lot of effort to cognitive tasks, which contributed to "deep learning" (p. 654). Along the same vein, Baeten et al. (2008) reported that students did not take a deep approach to learning if they were unmotivated.

It was not surprising that the participants demonstrated a desire to excel or improve at designing effective learning experiences for their students. The workshop was not mandatory, and therefore people who were not interested in improving or excelling at course design probably did not register for it. Registrants could decide to withdraw from the workshop at any time without penalty, so only the ones who were interested in learning completed it.

Making connections.

Participants demonstrated a deep approach to learning by making connections between new ideas and prior learning, between their own course and other people's courses, between various disciplines, and between course design and other types of planning. These connections helped them to think critically about their course, as well as to gain ideas from others about

strategies to use when faced with similar challenges. By making connections, participants viewed their course as more than an isolated offering, but rather as part of a larger learning experience for students.

My finding that making connections was indicative of a deep approach to learning was supported by prior research. According to the literature, Ramsden (2003) stated that relating previous understanding to new knowledge, and relating knowledge from different areas or courses are characteristics of a deep approach. Lau et al. (2008) found that group work tended to be positively related to a deep approach. When working in a group, students were required to organize their ideas so they could explain them to others. Through dialogue, they made connections between diverse ideas. Entwistle and Waterston (1988) asserted that connecting ideas and concepts in order to make interpretations or judgments demonstrated a deep approach to learning.

Nine interview participants demonstrated a deep approach to learning by making connections in various ways. For example, this interview participant stated,

> Having breadth in the room helped give different insights. And because my field is so interdisciplinary, when you're doing a class that's an option course, you want to have something for everyone. And thinking about how it all fits into my course was very neat (P12, first interview).

The way the participant was able to make connections between other people's courses and his or her own, distill different ideas, and apply them in a way that enhanced the course design was indicative of a deep approach to learning.

Reflection.

Six of the 11 interview participants and five of the 34 respondents on the open-ended survey questions referred to reflection as an important part of their learning process. Although the face-to-face learning environment fostered reflection, the online environment was mentioned more often in association with promoting reflection. Participants mentioned that the online environment gave them space and time to elaborate on their thoughts, puzzle through aspects of their course, and consider the feedback they had been given. This type of reflective thinking was indicative of a deep approach to learning.

What was found in my study aligned with Marton and Saljo's (1976a) work, in which they described deep-level processing as a focus on "what is signified" in the text, or comprehending what the author was trying to say (p. 7). In other words, reflection about meaning was the very foundation of a deep approach to learning. According to Entwistle (2000), a deep approach to learning occurred when the learner monitored his or her understanding of concepts and ideas. Segers, Gijbels, and Thurlings (2008) found that students' perceptions of portfolio assessment were that the activity required application and reflection, and therefore they tended to adopt a deep approach for the task.

Subsequent research on this topic was not in complete agreement though. Baeten et al. (2008) found that surface approaches to learning increased with the use of portfolio assessment, though portfolios usually require students to take a reflective look at their own learning. The researchers speculated that perhaps the heavy workload associated with the portfolio-based learning environment affected students' learning approaches more so than the assessment. Their study showed that students took the opposite learning approach to what was intended, indicating

that it can be tricky to foster a deep approach to learning, and more than one factor influences learning approach (Baeten et al., 2008).

My study aligned with the research in which reflection was indicative of a deep approach to learning. One survey respondent wrote, “the online activities continue the one-to-one discussions, give time to reflect, search other resources, and offer all opinions that can be shared” (P37). Activities such as doing further reading and continuing a discussion indicated a deep approach to learning. Reflecting on new information and ideas also fostered a deep approach to learning by allowing them to make connections and apply the learning to their own context.

Sense of satisfaction or confidence.

Five of the 11 interview participants stated that they were either satisfied with what they accomplished in the workshop or felt more confident in their abilities to design a course. The participants stated that they felt positive about their designs, thought they had a better idea of how to proceed through the course design process, or felt better informed to make decisions when designing a course. As one participants said, “I had no idea. But to know that there’s at least some template, some thinking about it, I have that now. I feel empowered that I can do that [design a course] (P14, second interview). This sense of satisfaction or confidence signified a deep approach to learning.

There was very little information in the literature about satisfaction or confidence and a deep approach to learning. According to Biggs and Tang (2011), when using a deep approach, learners “have positive feelings: interest, a sense of importance, challenge, exhilaration. Learning is a pleasure” (p. 26). Feelings of exhilaration could be compared to a sense of satisfaction with the learning task. A sense of confidence did not appear in the literature, though Entwistle (2001) noted that being actively interested in course content was characteristic of a deep approach.

Engagement in the learning task was also typical of a deep approach, which may result in satisfaction. One study of three blended professional development programs for teachers (Owston et al., 2008) found that participants increased their confidence as a result of the professional development activities. Using interview data and pre and post-program survey data, the researchers found that participants showed an increase in confidence relating to trying new pedagogical approaches in the classroom.

Interest and engagement in a learning task are different from satisfaction and confidence, though. It is possible that participants were satisfied even though they took a surface approach to learning, and confidence did not necessarily correspond to a deep approach. Considering the minimal substantiating literature on the theme of a sense of satisfaction or confidence, it is questionable if it was indicative of a deep approach to learning.

Surface Approaches to Learning

The second research question of the study asked how participants in a faculty development workshop took a surface approach to learning. Three themes from the research findings were reported in Chapter Four: low participation, barely met requirements, and forgot quickly.

Low participation.

Eight of the 11 interview participants appeared to take a surface approach to learning in one or more of the workshop activities. They most commonly identified the online discussion board as the activity in which they participated less. Participants expressed their low participation in ways such as having too much to do or not having enough time between face-to-face sessions to get all their homework done. Two of the 34 survey respondents stated that they did not participate in the online discussions because they did not know how to use the software.

Research in the field supported the finding that low participation was indicative of a surface approach to learning. Entwistle (2000) described a surface approach as one where the learner was just trying to get the task over with. Since participants in my research study stated that they were so busy, one possible explanation for their low participation could be that their workload was just too high, either within the workshop or in combination with their other commitments. Some participants in Owston et al.'s (2008) study stated that they did not participate fully in online discussions and activities due to a lack of time. Although the participants were technically given teaching release time for the professional development, some of them used the release time to do a variety of other activities such as catch up on marking or plan lessons. A few participants stated that they were often interrupted by others, or that their school administrators asked them to take on extra tasks such as cover a class during the time set aside for the professional development. Therefore, their heavy workload had an impact on their participation levels (Owston et al., 2008). In a study of teacher professional development, Coole and Watts (2009) found that a far greater percentage of participants were "low-engagers" (51%), reading discussions without responding or initiating conversations, than "communal engagers" (9%), actively engaging in conversations by responding to people and initiating new topics (p. 21). Groves (2005) also found that the learning environment was not the sole influence on learning approach. Students in a problem-based learning course tended to adopt a surface approach; again, workload was cited as a possible factor that prevented a deep approach to learning. The researcher speculated that a heavy workload was a barrier to participation, playing a role in participants' adopting a surface approach to some of the learning tasks (Groves, 2005).

Another factor that may have prompted participants to take a surface approach in the workshop was lack of relevance. Research showed that learners were more likely to take a deep

approach when the learning task was relevant to their professional practice (Entwistle & Tait, 1990). Thus, it is possible that participants in my study found some of the workshop activities to be less relevant to their teaching. Since they identified the online discussions as an area where they participated less, perhaps they did not find the discussions to be interesting or relevant. As one survey participant wrote, "I posted my work and provided feedback to my partner as assigned. Replies – mine and others – seemed not to address major goals well" (P6). The study conducted by Owston et al. (2008) supported the claim that relevance had an impact on participation. Their research suggested that less relevant professional development resulted in lower participation rates. Teacher participants in the study stated that they would have preferred to be grouped by grade level rather than random assignment to the discussion board, since they would have more in common with people who taught the same grade level. They were not motivated to discuss issues that were not related to their teaching context (Owston et al., 2008). Perhaps participation levels in my study would have been higher if discussions had been more relevant to learners.

Barely met requirements.

Unlike most other themes, the theme of barely meeting the workshop requirements emerged from the course plans and survey responses, not the interviews. None of the participants stated that they barely met requirements in the workshop or took a surface approach to learning, yet a few of their course plans and learning outcome statements were less than thorough. Interview participants were a bit more candid about their participation online, with two of them stating that they did not contribute much to the discussion board. It is possible that some participants did the bare minimum amount of work required to receive the workshop certificate of completion, at least for some of the tasks.

Biggs and Tang (2011) mentioned that learners taking a surface approach were trying to do the minimum amount of work required to pass. Learners' intentions were to avoid failing while minimizing the effort required to complete the task. They suggested a number of possible reasons for taking this approach, such as lack of time, misunderstanding the work requirements, and the material's lack of relevancy to the learner. Phan (2008) noted that surface processing was "considered a passive, extrinsic form of engagement" in which learners are completing the work because it is required (p. 327). Gijbels et al. (2005) found that structuring the learning environment in a way to encourage a deep approach to learning was not sufficient to invoke learners to adopt it. Many factors contributed to learning approaches, some which were personal to the learner.

Given that there was a certificate of completion at the end of the workshop, not grades, it is possible that participants demonstrating a surface approach to certain tasks were attempting to do just enough work to ensure that they would receive the certificate. Another potential explanation is that some of the tasks were not very relevant to learners, so they did the minimum amount of work to complete the task and get the workshop certificate. Faculty members and graduate students have busy schedules with many competing demands on their time; working on professional development tasks that have little relevance to their practice would logically have low priority for them.

Forgot quickly.

Quickly forgetting essential concepts from the workshop was the third theme that emerged from the data to suggest that some participants took a surface approach to learning for some tasks. During the first interview, two of the 11 interview participants either could not remember critical concepts or stated that they already forgot something important. It was

expected that people would forget main concepts for the second interview, four to six months later, especially if they had not used what they learned to design a course. However, the first interview was scheduled within two to four weeks, so participants should have recalled major concepts if they had been engaged in the learning.

Findings from my study dovetail nicely with seminal research in the field. In Marton and Saljo's (1976a) study, students who used surface processing with the intention of reproducing factual information were less able to remember information from an article they had read five weeks earlier than students who read it with the intention of deep processing. Harackiewicz et al. (1997) found that students adopting a work avoidance stance tended to underperform on exams compared to students with mastery or performance goals. Trigwell and Prosser (1991) found that students with a deep approach to learning achieved better grades than students with a surface approach. Like these noted studies, my research indicated that a surface approach to learning was less effective for long-term retention than a deep approach.

It would be presumptuous to state that the participants forgot core concepts quickly due to a surface approach to learning though. One cannot say with certainty that the participants took a surface approach to learning in the workshop. Other possible reasons for forgetting quickly could include the lack of application to their teaching practice, insufficient time to engage with the new material, too many concepts packed into a workshop that was short in duration, or an overwhelming amount of unfamiliar information. However, forgetting quickly could have been an indicator of a surface approach to learning.

Face-to-Face Learning Community and Approach

The third research question looked at how the role of the face-to-face learning community affected the approach participants took in the workshop. The research findings

reported in Chapter Four suggested five themes: clarified or reinforced concepts, generated ideas, felt a connection, felt inspired, and discouraged involvement.

Clarified or reinforced concepts.

One of the ways in which the face-to-face learning community facilitated participants' deep approach to learning was by clarifying or reinforcing workshop-related concepts. Through group discussion and online activities, participants gained understanding of the issues, saw practical examples of how other people were addressing their course designs, and received feedback at a time that convenient for them. Five of the 11 interview participants mentioned that the face-to-face learning community was instrumental in this role, while six of the survey respondents mentioned how the face-to-face learning community assisted in their understanding of core concepts.

One of the central reasons why faculty development is conducted as a sustained cohort model is for participants to learn from one another (Gillespie & Robertson, 2010). Therefore, the finding of clarifying or reinforcing concepts is consistent with the research. In a study of a community of practice in higher education, the researchers found that newer instructors benefitted from the experience of more seasoned faculty members through clarifying ideas and accessing the group's professional knowledge (Teeter et al., 2011). In my study, participants with little teaching experience stated they learned a lot from more experienced instructors. However, the instructors who had more teaching experience said they learned from others in the workshop as well.

The finding was consistent with other research that asserts that the learning community contributes to participants' learning. Rausch and Crawford (2012) stated that the cohort model of

faculty development promoted intellectual stimulation and construction of knowledge. Along the same vein, one interview participant in my study stated,

> I just like to learn with others. I would rather listen to them than check it out in the binder because I just have difficulty extracting information through reading. So that's why I prefer workshops. Because it involves feedback and perspectives of other people, which makes things richer in my opinion (P9, first interview).

The learning community clearly contributed to the participant's understanding.

Generated ideas.

The face-to-face learning community prompted participants to take a deep approach to learning through generating ideas and suggestions for issues related to course design. Brainstorming and feedback activities helped to identify possible strategies; diversity in the group was a particular strength in this regard. Participants said they did not always use the suggestions, but discussing different alternatives prompted them to consider ideas that were not typically used within their discipline. Participants particularly benefitted from seeing real examples of course designs that others had created; such examples were valuable when they were uncertain of how to proceed.

In their study of teacher professional development, Bulter and Schnellert (2012) found that participants learned from one another through sharing ideas and strategies. In particular, setting aside the time for inquiry was instrumental to learning.

Research on faculty development in higher education supported the theme of generating ideas. Glowacki-Dudka and Brown (2007) found that the top benefit of participating in a faculty learning community was gaining teaching strategies. Similarly, participants in my study stated

that the learning community helped them to brainstorm for ideas, suggesting strategies they may not have thought of on their own. According to one participant,

> People were very helpful. And they were very open minded to what I was presenting and a lot of their suggestions I've incorporated. I think that created an atmosphere over the three weeks of camaraderie and it allowed for trust with your ideas. Because when you're creating it's not about failure, it's about trying something and so you're thinking aloud, you're brainstorming (P12, first interview).

This participant, like others in the study, found the brainstorming activities to be one of the benefits of being in a learning community. The finding was in alignment with prior research on face-to-face faculty development learning communities (Teeter et al., 2011; Persellin & Goodrick, 2010).

Felt a connection.

Nine of the 11 interview participants and two out of 34 survey respondents said they felt a connection to others in the workshop, which enhanced their learning in some way. Feeling supported by others allowed them to express their ideas, give and receive feedback, and see similarities between issues of interest to everyone.

Feeling a connection to others in the workshop aligned with the literature around communities of practice in faculty development (Teeter et al., 2011; Persellin & Goodrick, 2010). Teeter et al. (2011) described several communities of practice at McMaster University that were organized to enhance knowledge construction in a social learning environment. They asserted that the social aspects of learning fostered engagement, and therefore learning. The community was instrumental in fostering a sense of belonging in the group (Teeter et al., 2011). Persellin and Goodrick's (2010) quantitative study of 206 faculty members examined the long-

term impact of a faculty development program. Their research indicated that a sense of camaraderie and trust within the cohort was beneficial in terms of learning for the participants.

Felt inspired.

The face-to-face learning community facilitated a deep approach to learning by inspiring participants to do their best work. They were inspired by other group members' positive attitudes, intrigued by their creative suggestions, and the feedback they received on their work gave them confidence in their ability to design an effective course.

Glowacki-Dudka and Brown (2007) reported that participants in their study of a faculty learning community benefitted from sharing ideas with one another. More than one participant stated that being part of the learning community was motivating for them, leading to ongoing conversations about teaching and curriculum. As one participant in my study stated, "It was inspiring to me to see what everyone was doing and their different approaches. I love that about this place" (P12, first interview). Although prior research about the face-to-face learning community inspiring others is light, findings in my study have supported this assertion.

Discouraged involvement.

The research uncovered one way in which the face-to-face learning community promoted a surface approach to learning for a small minority of participants. One interview participant and two survey respondents stated that in-class discussions were sometimes dominated by certain people, making equal participation challenging. The interview participant stated that he or she compensated for lower levels of participation in class by taking full advantage of the online discussion board. A survey participant noted, "The online activities give all people equal opportunities to participate and get involved" (P37). It would seem that for some people the face-to-face learning community had a tendency to limit their involvement in group discussions.

There are few prior studies that support the possibility of participants being discouraged from participating or intimidated by others in a workshop. In a study of a faculty development workshop, Persellin and Goodrick (2010) found that a few of their 206 participants did not like the peer feedback model. One participant reported feeling intimidated by others in the workshop. While the number of participants in their study who stated that they were intimidated by others was low, it nevertheless had a negative impact on their learning experience. My study also had a low number of participants who asserted that they were discouraged from participating in the face-to-face environment by other participants. However, it is unfortunate that any participants were negatively affected. Therefore, the theme of the face-to-face learning community discouraging involvement for some participants merits further study.

Online Learning Community and Approach

The fourth research question looked at how the role of the online learning community affected the approach participants took in the workshop. The research findings reported in Chapter Four suggested five themes: generated ideas, promoted critical thinking, promoted reflection, encouraged equitable participation, and impacted on face-to-face learning. All four of the themes identified encouraged participants to take a deep approach to learning; there was no evidence that the online learning community encouraged people to take a surface approach. One possible reason for this is that participants who might take a surface approach to the online activities simply did not access the online forums. Therefore, the learning community did not have the means to influence learners to take either approach.

Generated ideas.

Six out of 11 interview participants stated that the online learning community was beneficial in generating ideas and strategies for their courses. They appreciated being able to

view how other people approached course organization and writing course outcomes, and liked having fewer time constraints to consider the feedback they received. Seven of the 34 survey respondents also noted that the online learning community helped them to generate ideas by gaining new perspectives and receiving more detailed feedback than they did in the face-to-face learning environment.

Prior research has also found that online learning communities have aided participants in generating ideas. Jarosewich et al. (2010) found, in their study of an online professional development community, that the primary way in which people collaborated online was through sharing ideas with others and gaining new strategies for their own classroom. Therefore, the finding that the online learning community assisted participants in generating ideas is consistent with the literature.

Providing real examples of course designs may have been a particularly important role of the online learning community. As one survey respondent commented, “I did learn in the role model way (from other group members’ entries) how I could now go forward in creating teaching and learning activities” (P10). Having examples of course designs may have been beneficial because many new instructors are not given much help designing their first course; perhaps they receive a syllabus from the previous instructor but often not much more than that. Therefore, seeing examples of good designs may have been instrumental to their success as a new instructor.

Generating ideas in the online environment seemed to be a bit different from the ways in which the face-to-face learning community generated ideas. The traditional classroom seemed well suited to brainstorming activities and discussions in which people strategized on the spot. Due to the permanent nature of the online discussion forums, the online learning environment

facilitated the process of generating ideas through appraising other people's work samples and reviewing feedback in more depth.

Promoted critical thinking.

Interview participants identified several ways in which the online learning community prompted them to think critically about their course design. They appreciated having more time to devote to giving and receiving feedback, and accessing asynchronous discussions at a later time. They also benefitted from viewing other people's examples relating to course design. Survey respondents also stated that they liked having time to think about issues before responding to others, and added that referring back to feedback they had received was very helpful in making revisions to their course design. Analysis of the online discussion forums showed that cognitive presence was demonstrated throughout the discussions, with all four phases of inquiry (triggering event, exploration, integration, and resolution/application) evident in discussion posts.

Literature reviewed supported the theme that the online learning community promoted critical thinking. A recent study by Ritter, Polnick, Fink II, and Oescher (2010) that compared student learning found no significant difference in critical thinking in face-to-face, online, and blended courses. The researchers noted that the participants were graduate students, and perhaps their presumed intrinsic motivation had more of an impact on learning than the mode of delivery. Dennen (2005) found in an examination of nine different course discussion boards that the online dialogue prompted students to think critically in two different ways. First, students tried to make connections between the course material and other learning, as well as their own experiences and perspective. Second, by examining other people's perspectives they built mutual understanding. Dennen's (2005) findings dovetail nicely with the results of my study.

Richardson and Ice (2010) found that it was possible to foster critical thinking in online asynchronous discussions. In their study, the frequency of posts that reached the integration and resolution phases of the practical inquiry model was dependent on the type of discussion activity (case-based, debate, or open-ended). In my study, 23.4% of the frequency counts were classified in the triggering phase. Exploration accounted for 42.3% of the frequency counts, while integration had 28.1% and resolution/ application had 6.3%. While most discussions did not show evidence of taking the discussion to the resolution phase, the workshop in the study was blended, offering participants the opportunity to extend their discussions in the face-to-face environment. It is possible that they continued some of the conversations outside of the discussion board. It is also possible that some of the discussions were not considered compelling enough to continue to the resolution phase. Regardless, the theme that the online learning community promoted critical thinking was supported by other research.

Promoted reflection.

Both interview and survey participants stated that the online learning community prompted reflection about the learning tasks. The asynchronous nature of the discussion board allowed them to access feedback multiple times, refer to workshop materials and readings, and look at other people's work as examples of different approaches to a task. Whereas feedback and discussions in the face-to-face classroom was fleeting, the online environment served as a more permanent record of conversations, facilitating a reflective approach to workshop tasks.

This finding is supported by prior research of online learning communities. In a study of a blended format professional development program (Donnelly, 2010), the researcher found that the participants wrote largely descriptive posts at the beginning. With a bit of feedback and structure, they began to write more reflective posts. Likewise, Ranno, Diers, and Birk (2005)

found that the online discussion forums of a blended format program allowed participants to be reflective and perhaps do some additional reading before responding to a question. Two participants in my study stated that they did further reading before posting to the discussion board. Participants of Stodel, Thompson and MacDonald's (2006) study said that they felt the discussion forums enhanced reflection, allowing them to put more thought into discussion questions than in a face-to-face class. One participant in my study noted that the face-to-face discussions happened so fast that it was difficult to recall everything that was said later on.

Encouraged equitable participation.

Since participants could access the online discussion board at their convenience and spend as much or as little time on it that they wanted, the online learning community facilitated equitable participation. One of the 11 interview participants and two of the 34 survey respondents said that the face-to-face learning community discouraged them from participating at times. This was not the case with the online forums. The discussion forums allowed participants to talk about their own course, mention issues of interest to them, and participate in the discussions they found interesting.

Impacted on face-to-face learning.

There were two ways in which the online learning community had an impact on face-to-face learning: by promoting the completion of work, and by continuing the momentum with discussions that started in the face-to-face classroom. Participants were encouraged to complete their homework because they were required to post it to the discussion board for comments and feedback from peers. Since the learning community could access everyone's posts, participants could check the discussion board to see who did not complete the work. Being able to see who had posted encouraged participants to complete the work and come to the next face-to-face

session prepared. Additionally, the online learning community affected face-to-face interactions by impacting on the discussions. Online discussions carried the momentum between face-to-face sessions, extending and enriching discussions. When participants met again, they picked up where they left off instead of starting over.

Prior research supports the finding that online interactions complemented face-to-face interactions. Donnelly (2010) also found that the online discussions helped to prepare participants for in-class activities. Completing readings and participating in the forums prior to coming to a face-to-face class allowed them to think about issues in advance of in-class discussions. Rausch and Crawford (2012) agreed that online discussion forums can extend in-class discussions. In Conrad's (2005) study, learners reported that the two modes of delivery, face-to-face and online, enhanced each other and increased student satisfaction. When done well, online and face-to-face activities are thoughtful, complementary, substantive, and integrated as opposed to separate and distinct (Garrison & Vaughan, 2005). Thus, the theme of the online learning environment impacting on face-to-face learning was supported by the research.

Impact of Learning Community on Approach

The fifth research question examined the relationship between the Community of Inquiry model and the effects of the learning community on learning approach taken by participants in the workshop. Interview and survey data suggested that the learning community tended to promote a deep approach to learning in both the face-to-face and online environments of the blended program.

Face-to-face learning community and approach.

The face-to-face learning community tended to facilitate a deep approach to learning in four ways: by clarifying or reinforcing concepts, generating ideas, fostering feelings of

connection amongst participants, and inspiring participants. However, there was one theme that emerged from the data suggesting that the face-to-face community encouraged a surface approach for a minority of participants. Three participants noted that there were individuals in their workshop that dominated the conversation, which discouraged them from participating in conversations.

All three presences from the Community of Inquiry model, social, cognitive, and teaching, were found in the face-to-face learning environment, and all of them played a role in facilitating a deep approach to learning. More themes related to teaching presence than social and cognitive presence. The themes that mapped to teaching presence included: clarified or reinforced concepts, generated ideas, felt a connection, and felt inspired. A possible reason for the face-to-face learning environment being so strong in teaching presence was that participants in the workshop did a lot of peer learning activities. Some participants had a fair bit of teaching experience, and all participants had some personal experience to share with others. Teaching presence may have been pronounced in the workshop due to its emphasis on peer learning activities.

Three of the themes mapped to cognitive presence encouraged a deep approach to learning: feeling a connection to others, generating ideas, and clarifying or reinforcing concepts. Thus, there was a considerable cognitive presence in the face-to-face workshop. Two of the themes mapped to social presence: felt inspired, and felt a connection to others.

Interestingly, the only theme identified that encouraged a surface approach to learning related to social and cognitive presences. One out of 11 interview participants and two survey respondents out of a total 34 participants said they were discouraged from participating in class by others who were dominating the discussions. While there were only a small number of

participants to report this finding, I did not deliberately ask people in the interviews if other workshop participants discouraged them from speaking; it was possible that more participants could have reported it had I asked the question. Nevertheless, even a small percentage of participants to report that they were discouraged from participating was cause for concern. It would be interesting to conduct more research to see who finds the learning community to be restrictive, and how we might help such participants.

Online learning community and approach.

The online learning community encouraged a deep approach to learning in the following ways: generating ideas, promoting critical thinking, promoting reflection, allowing for equitable participation, and impacting on the face-to-face classroom. As with the face-to-face learning environment, social, cognitive, and teaching presences were all demonstrated in the online learning environment, and all three played a role in encouraging a deep approach to learning in participants.

The data suggested that the online learning community was particularly helpful in facilitating cognitive presence within the workshop. Most themes (i.e., promoted critical thinking, promoted reflection, generated ideas, impacted on face-to-face learning) contained an element of cognitive presence, which indicated that many participants in the study found the online discussions to be a valuable part of their learning in the workshop. Data from the interviews and survey responses revealed that some participants read the online discussions without posting a response. These participants (one interview participant and two survey respondents) looked at work examples that others had posted, examined models of course designs, and gained strategies for their own designs. Even though they were not engaging in discourse, they learned from the examples posted by others.

Three of the themes were mapped to teaching presence: encouraged equitable participation, impacted on face-to-face learning, and generated ideas. The online learning community was thus strong in teaching presence as well. According to Garrison et al. (2000), aspects of teaching presence could be performed by any member of the learning community. Within the course design workshop, teaching presence was demonstrated in the forums by many different people. For example, one of the discussion questions asked participants to post the learning outcomes for the course they were designing to the discussion board. In doing so they provided examples for everyone to examine. When others posted questions about their outcomes, the participants provided clarification or modified the outcome, again providing an example, and perhaps modelling strategies for others to use. Participants in the online learning community thereby took shared responsibility for aspects of teaching presence.

Interestingly, only two of the themes related to social presence: encouraged equitable participation and impacted on face-to-face learning. Additionally, frequency counts of the online discussions showed that some aspects of social presence were quite low. Since the study looked at a blended format workshop, it was possible that participants relied more on the face-to-face learning environment for social presence than the online learning environment.

None of the themes that mapped to the online learning community were related to a surface approach to learning. Stated another way, I did not find any data to suggest that the online learning community promoted a surface approach to learning for participants in the study. A possible explanation for this was that the online learning environment was much easier to ignore than the face-to-face learning community. Participants who did not want to do the online activities simply did not log in to Blackboard ™ to participate in the online discussions or activities. Therefore, it is possible that participants who took a surface approach to the online

activities were absent from them, and so the online learning community had no effect on their approach to learning.

Implications for Practice

The research findings reported are limited to the study of a particular faculty development workshop offered to faculty and graduate students in a blended format at a Canadian university. However, a comparison of the results to related literature suggests that the study's implications for practice may have implications within other faculty development contexts in higher education. In the following section practical implications are reported for the delivery of blended faculty development offerings in higher education.

Deep approach to learning.

Based on the ways in which participants took a deep approach to learning in the workshop, I gleaned several insights that may be beneficial to faculty development in higher education. The theme of considerable learning emerged from both interview and survey data. Participants stated that they learned a great deal about course design in the workshop. The data pointed to the types of teaching and learning activities that participants found to be valuable in terms of their learning: analyzing parts of their course, discussing issues with others, and giving and receiving feedback were all impactful activities. None of the participants mentioned that the presentations impacted on their learning, which may indicate that they prefer a more participatory role in the teaching and learning activities. Faculty developers can use this information to keep presentations short, and structure participatory workshops in which participants apply learning to their own practice, do critiques, give and receive feedback, and discuss issues with their peers. The amount of time spent on presentations should be minimal to allow for a more participatory approach. Participants in faculty development workshops can use

this information by recognizing the value of such activities and participating in them fully. If they are in a workshop that does not have enough discussion and room for testing ideas with others, they can request that the facilitators build in time for participatory activities.

Participants also demonstrated a deep approach to learning by being highly interested or engaged in the learning process. It is possible that this theme went hand in hand with the first one, considerable learning: being engaged in the learning process led to considerable learning from the workshop. If that was the case, implications for practice for educational developers would be to structure engaging learning experiences with participatory teaching and learning activities, in order to create impactful learning experiences. It is possible that participants were highly interested or engaged because they were taking the workshop voluntarily. Implication for practice would be to allow faculty members different options instead of making specific faculty development initiatives mandatory for everyone. For example, senior administrators might require faculty members to participate in a certain number of hours of professional development, but the type of program taken would be chosen by the individual.

Another way in which participants demonstrated a deep approach to learning was by applying concepts from the workshop to their own context. All 11 of the interview participants mentioned concepts, ideas, or theories that they were able to put into practice when designing their own course. Implications for practice for educational developers would be to ensure that workshops go beyond discussion, encouraging participants to apply new learning in some way, which may in turn promote a deep approach to learning tasks. Implications for learners are that they should complete workshop assignments, rather than attempting them if time allows.

Making connections was another way in which workshop participants demonstrated a deep approach to learning. Some of the connections they made were between new ideas and prior

learning, between their own course and other people's courses, between disciplines, and between designing courses and other types of planning. Implications for practice for educational developers include building on participants' existing knowledge, incorporating discussions into workshops, and providing examples from other disciplines. A generic approach to workshop topics, with a presentation to faculty and five minutes to discuss will not be adequate for many people to make those connections. Instead, educational developers should allow participants to take over some of the learning process so that they can make meaningful connections.

Additionally, some participants took a deep approach to learning by reflecting on their learning. Several participants found it beneficial to take their time to think about new concepts in relation to their course design; the online learning environment was ideal for this. Implications for practice include the need to build reflective activities into faculty development programs. Sometimes educational developers organize programs in a solid block of time, such as reading week, which makes sense from a planning standpoint. However, some participants appreciate having a bit of time to step back and see the larger picture. Possible strategies include scheduling faculty development events staggered over time and taking advantage of the online learning environment to allow people time and space to reflect and explore issues at their own pace.

Promoting a deep approach to learning seems to be a complicated interplay of personal and contextual factors, however. People who work in faculty development can plan carefully to promote a deep approach to learning, but there is no guarantee that all participants will adopt it. Since personal factors are also important in determining approach to learning, the learners are ultimately going to determine which approach they take. An implication for educational developers is to remember that the learning experience is also dependent on the learners and is not the complete responsibility of the instructors.

Surface approach to learning.

Examining the ways in which participants took a surface approach to learning also provides some implications for practice. One way that participants demonstrated a surface approach to learning was through low participation in some of the workshop activities. Participants who mentioned low participation most commonly identified the online activities as the ones in which they put less effort, due to a lack of time and not knowing how to use the tools. An implication of this finding was that educational developers need to ensure that all activities, regardless of delivery format, need to have a purpose that is conveyed to participants. Online activities should have educational merit and relevance to participants in their own right and not be add-ons to the work being done in the classroom. When busy people set aside a substantial amount of time to do professional development, they expect it to be relevant to their teaching. If the activities are relevant and purposeful, they will be more likely to engage in them.

A blended program should be structured in a way that capitalizes on the strengths of each delivery mode, with the two complementing each other (Garrison & Vaughan, 2008). Another implication that educational developers should consider is that there are some people who are not familiar with online technologies such as a course management system; they will need training and support to use them successfully. Implications for learners are that they should ask for assistance when needed, rather than miss out on a learning opportunity. They should also commit to the workshop or program when they sign up, setting aside enough time to really engage in it instead of trying to fit it into an already busy schedule.

The second way in which some participants demonstrated a surface approach to learning was by barely meeting the necessary requirements in the workshop. It is possible that some of these participants completed the bare minimum amount of work possible to get the workshop

certificate. Since motivation is a personal factor, implications for practice for educational developers would be to try to find ways to motivate all participants. Implications for learners are to commit to the program if they want to take advantage of the learning opportunity or to withdraw if they are not interested. Faculty developers can be aware that some participants may not be fully invested in the learning, and try to find ways to motivate them.

The third way in which some participants took a surface approach to learning in the workshop was by forgetting things quickly. Some interview participants admitted that they did not remember key concepts or information they had studied a short time ago. Making the learning meaningful and enduring is a critical issue in faculty development, as in other learning situations. The question is that faculty developers need to address is how they can design and facilitate professional development opportunities that have a lasting impact on participants.

Importance of the learning community.

Every interview participant in the study stated that the learning community was beneficial to their learning in some way. Participants in the workshop under study built their comfort and trust in the community over three weeks. It is doubtful if trust in the community could be established in a shorter workshop, such as a three-hour program. Implications for practice for facilitators in faculty development would be to consider whether the learning community figures prominently in what they are planning, and to structure the workshop over time if appropriate. The online learning community can be used to good effect if the program includes assignments and examples, feedback, and reflection.

Importance of face-to-face learning community.

The face-to-face learning community played an important part in the faculty development process in a number of ways: by clarifying or reinforcing concepts, generating ideas, facilitating

feelings of connection, and inspiring people. Implications for practice for educational developers would be to structure in-class activities and allow the learning community the time required to pursue discussions, including brainstorming, that have a positive impact on their learning. People who deliver faculty development initiatives by relying heavily on presentations should consider other ways in which information can be delivered, such as readings, online presentations, and videos that can be viewed at the learners' convenience, to use valuable face-to-face time more effectively with more participatory activities.

One theme that emerged suggested that the face-to-face learning community played a role in encouraging some participants to adopt a surface approach to learning. A small number of participants stated that certain people in their workshop dominated conversations, making it challenging for them to talk. Implications for practice for educational developers are that they need to be aware of dominating personalities in the room, exercise strong facilitation skills, and try to balance out the amount of time individuals get for talking about topics that are important to them. Otherwise, there is the risk that more reserved participants will not engage in the activity and may adopt a surface approach rather than competing to be heard.

Importance of the online learning community.

Like the face-to-face community, the online community prompted participants to take a deep approach to learning in valuable ways. While both environments were helpful in allowing participants to generate ideas, the online learning community was especially good at promoting critical thinking, promoting reflection, and encouraging equitable participation.

Implications for practice for educational developers are to structure online activities that make the most of these strengths. The online environment is particularly well suited to

discussions in which people have to prepare or do some reading or to refer back to posts at a later time. Reflective activities are also well suited to the online environment.

Blended format for faculty development.

The face-to-face and online learning communities both had an impact on participants' approaches to learning. While they played a similar role in some ways, such as facilitating the process of generating ideas and providing real examples of course design work, they played a different role in others. The face-to-face learning community was particularly strong at clarifying or reinforcing concepts, and inspiring others to do their best work. The online learning community, however, encouraged equitable participation and promoted reflection. From this we can deduce that both modes of delivery, online and face-to-face, have a place in faculty development and that blended programs such as the one in the study offer more benefits than just flexibility of scheduling if they are blended in a way that enhances the strengths of each one (Vaughan & Garrison, 2008).

The finding that face-to-face and online learning communities encouraged a deep approach to learning in different ways for participants has implications for instructors who work in the area of faculty development. Implications for practice are to design activities and interactions that take advantage of the strengths of the different communities. Implications for administers are to support blended faculty development initiatives in their institution.

Recommendations for Practice

The study points to several recommendations that faculty developers can consider when designing programs for high quality faculty development.

To promote a deep approach to learning, ensure that learners have a participatory role. Discussions are important, but learning must go beyond discussion: learners need to apply

concepts in a real way, to their own teaching context. Presentation time should be kept brief to allow learners the time for discussion and application of concepts.

Learners can benefit from participating in a cohort. Cross-disciplinary groupings have the potential to expose learners to ideas that are different from their own discipline. Having participants share real examples of what they are doing in their teaching practice can assist in seeing what works well and generating new ideas for people to incorporate into their own practice. Consider planning the faculty development initiative over time, so that participants have the chance to build relationships over time. Also, consider the format of the program. Communities of practice, such as brown bag lunch sessions, provide time in between meetings for participants to reflect and implement new ideas and strategies. Additionally, the cohort needs time to establish connections, building comfort and trust with colleagues.

Activities need to have a well-defined purpose and educational merit for people to devote time to them. Ensure that all educational activities are well defined to enhance participants' learning, and convey the purpose of the activities to learners.

Use the strengths of each delivery mode to structure effective faculty development. The face-to-face learning environment is great for clarifying and reinforcing concepts, brainstorming activities, and discussions. Be aware of participants who may want to dominate the conversation and allow everyone the time to discuss topics of interest to them. The online learning environment is ideal for viewing examples of other people's work, giving and receiving feedback, critical thinking, and reflection. Educational developers should structure online activities that take advantage of these strengths.

Delimitations and Limitations

Delimitations.

The study is delimited to investigating a blended format faculty development workshop on course design. The institution that offers this workshop has other programs that are delivered in a blended format. However, they are not a part of the study. The study was limited to one type of workshop only so that participants had common learning experiences: the face-to-face sessions were the same topics for all participants, as well as online discussions and activities.

Although this was a mixed methods study, the quantitative data were limited to descriptive statistics and some cross tabulations to test for interdependent relationships. The sample size was not large enough for more robust inferential investigations. Getting larger numbers of survey respondents would have required the study to extend over a longer span of time as further cohorts took the workshop under study, or to implement the study beyond the selected workshop. Since data collection occurred over one year, and several rich forms of data were collected for triangulation, it was determined that there was sufficient data to understand the case, and that there was no need to lengthen the data collection process further. While implementing the surveys in other workshops would have resulted in higher numbers of participants, it would also have weakened the study as the participants would have attended different workshop sessions and had different online experiences.

The research study examined the role that the learning community played in participants' approach to learning, but it did not extend to whether or not participants implemented new learning into their teaching practice. A longitudinal study of this nature was beyond the scope of this thesis. It is an important question though and worthy of future study.

Another delimitation of the study was that I chose not to study the achieving or strategic approach to learning, for two reasons. First, it has not been well established in the literature that there is an achieving approach to learning. Second, assuming that there is an achieving approach, learners who use this approach will use both deep and surface strategies as needed to maximize their grades. Since there is no graded work in the faculty development program under study, it seemed unlikely that participants in the study would adopt an achieving approach.

Limitations.

Although the research was carefully planned, it was subject to certain limitations. One participant out of 11 did not participate in the second interview, resulting in an attrition rate of 9%. Since the consent form indicated that data retained to the point of withdrawal would be used, I included the data from the first interview in my study.

Ideally it would have been best to interview participants from the same cohort. However, I did not receive consent from enough participants in one cohort for my study, so I interviewed people from three different cohorts. The sessions in each cohort were the same, and the online discussion questions and activities were identical as well, which helped to maintain consistency in the case study.

Another limitation of the study was that very few participants indicated consent to allow me to observe the face-to-face sessions. I had intended to do more in-class observations, but was only able to observe one group of participants. As a result, data from the observations were not as rich as intended in my research design.

A final limitation of the study was access to the online discussions. Three groups of participants allowed me to access their online discussions, far better than the in-class observations, but there was not universal consent. Data from the online discussions were

adequate, but not as robust as these may have been if all participants had allowed me access to the data.

Summary

This chapter has discussed the findings of the study in relation to existing literature. Most of the study's findings were supported by previous research. However, findings such as having a sense of satisfaction or confidence were minimally supported by existing research.

The face-to-face learning community tended to facilitate a deep approach to learning by clarifying or reinforcing concepts, generating ideas, fostering feelings of connection among participants, and inspiring people. All three presences of the Community of Inquiry model, social, cognitive, and teaching, occurred in the face-to-face learning environment. The online learning community also demonstrated that all three presences of the CoI model were evident. It encouraged a deep approach through the following: generated ideas, promoted critical thinking, promoted reflection, allowed for equitable participation, and impacted on the face-to-face learning. Thus, the face-to-face and online learning communities played different roles in encouraging participants to adopt a deep approach to learning. Using a blended format for the workshop added richness to the learning by capitalizing on the strengths of the different delivery modes.

Implications for practice for educational developers are many. They can structure faculty development programs in ways that promote a deep approach to learning, by limiting presentation time to make room for more participatory learning, allowing time for discussions, activities and feedback, and reflection. By structuring programs in a blended format, they can use the different delivery modes to their strengths. Allowing participants to select some of the topics for discussion and assignments will help them to identify issues that are important to them and

make connections. Additionally, educational developers can exercise strong facilitation skills in the face-to-face learning environment to ensure that dominating personalities do not discourage other people from participating.

Findings also have implications for learners. Learners can make the decision to commit to the faculty development initiative and participate fully in all activities. They can set aside time in their calendars so that workshop activities are not in competition with their regular work.

The study's findings also have implications for administrators in higher education. Administrators can support blended faculty development initiatives and faculty members who are taking them.

Readers should bear in mind the delimitations and limitations of the study. Decisions I made as the researcher were that the case included only one faculty development workshop. Although quantitative data were collected, the sample size was not large enough for robust quantitative analysis. Also, the study did not examine the achieving or strategic approach to learning as they were not seen as relevant to the study. The study also had several limitations. One interview participant withdrew from the study prior to the second interview. There were not enough participants from one cohort for a robust study, so I gathered participants from three cohorts. Additionally, a less than optimum number of participants consented to the in-class observations and discussion board posts, limiting the data gathered using these methods.

CHAPTER SIX: CONCLUSION

This chapter consists of three sections: a summary of the research, implications for future research, and concluding remarks.

Summary of the Study

Faculty members in higher education have a demanding job with a wide variety of professional responsibilities. One of the challenges they face is designing effective courses that engage students and promote intellectual growth. Faculty development opportunities, in a variety of formats, can help instructors prepare for their teaching responsibilities.

Touted benefits of structuring faculty development initiatives according to a cohort model include learning from one another, enriched conversations, support, and guidance (Wenger, 1998). As educational developers we often assume that people learn better in a group setting, yet we do not necessarily know how the learning community affects learning in a faculty development context, especially in an online learning environment. The purpose of my study was to examine how the role of the learning community, both online and face-to-face, affected participants' approach to learning in a faculty development workshop in higher education. The research questions were:

1. In what ways do workshop participants take a deep approach to learning in a blended faculty development workshop?
2. In what ways do workshop participants take a surface approach to learning in a blended faculty development workshop?
3. How does the role of the face-to-face learning community affect the approach that participants take to the workshop?

4. How does the role of the online learning community affect the approach that participants take to the workshop?
5. What is the relationship between the Community of Inquiry model and the effects of the learning community on learning approach taken by participants in the workshop?

Deep approach to learning.

The first research question looked at the ways in which participants took a deep approach to learning in the workshop. Seven themes emerged from the data that related to a deep approach to learning: considerable learning, high interest or engagement in the learning process, applying learning to one's own context, the desire to excel or improve, making connections, promoting reflection, and a sense of satisfaction or confidence.

Participants demonstrated considerable learning by identifying course design processes they used in the workshop or particular theories or approaches they explored in depth. Seven out of the 11 interview participants recounted what they learned several months after the workshop. They stated they were highly interested or engage in the learning process, demonstrating it by doing further research or study after the workshop and discussing related topics with others. Participants applied the concepts and ideas from the workshop to their own context. Seven of the 11 interview participants indicated a desire to excel or improve in terms of designing courses, in order to create a better learning experience for their students. They also demonstrated a deep approach to learning by making connections between new ideas and prior learning, their course and other participants' courses, between disciplines, and between designing courses and other types of planning. Six of the 11 interview participants showed a deep approach by being reflective as part of the learning process. Five out of 11 interview participants mentioned having

a sense of satisfaction in their work or more confidence in their ability to design an effective course.

Surface approach to learning.

The second research question explored the ways in which workshop participants took a surface approach to learning in the course design workshop. Three themes emerged from the interview and open-ended survey questions: low participation, barely meeting requirements, and forgetting quickly.

Eight out of 11 interview participants showed a deep approach to learning in some workshop activities, and a surface approach in others, through low participation in certain activities such as the online discussion forum. They did not show uniform enthusiasm for all workshop activities. For some activities, they barely met the workshop requirements. For example, three workshop participants completed their course plan, which was a workshop requirement for people who wanted to receive a certificate but did not do it very thoroughly. Additionally, two interview participants showed a surface approach to learning by quickly forgetting essential concepts from the workshop.

Face-to-face learning community and learning approach.

The third research question examined how the face-to-face learning community affected participants' learning approach in the workshop. One theme, discouraged participation, related to a surface approach to learning. However, the other four themes related to a deep approach to learning: clarified or reinforced concepts, generated ideas, felt a connection to others in the workshop, and felt inspired by others.

The face-to-face learning community facilitated a deep approach to learning by clarifying and reinforcing concepts. Through discussions and feedback, the learning community helped

participants to make sense of things that were confusing. They also helped to generate ideas. Brainstorming and getting feedback were very beneficial in seeing a diversity of perspectives. The face-to-face learning community also made participants feel connected to one another; being comfortable with one another allowed them to be more open to suggestions and new ideas, as well as offering them to others. Participants also stated that the face-to-face learning community inspired them with their innovative designs, encouraging them to do their best work.

The only theme that emerged regarding the face-to-face learning community and a surface approach was that it had the potential to discourage involvement for some participants. One interview participant and two survey respondents stated that certain individuals in face-to-face discussions tended to dominate the conversations, making it challenging for them to be heard and to bring up topics they were interested in. They compensated in part through the online discussion forums.

Online learning community and learning approach.

The fourth research question examined how the online learning community affected participants' learning approach in the workshop. Five themes emerged that related to a deep approach to learning, while no surface themes were identified. The five themes were: generated ideas, promoted critical thinking, promoted reflection, encouraged equitable participation, and impacted on face-to-face learning.

The online learning community promoted a deep approach to learning by generating ideas for participants. Being able to view other people's approaches to assignments gave them ideas they could use in their own design. The online learning community also promoted critical thinking, since they completed the online work at their own pace and not feel rushed. Participants stated that the online learning environment was particularly helpful in promoting

reflection, since they were able to read over the feedback and comments made by others several times if they wanted. The online discussion forum served as a permanent record of comments and suggestions. Additionally, online discussions impacted on face-to-face learning in two ways. First, by encouraging completion of the work, it meant that participants were more prepared for the face-to-face sessions. Second, the online discussions both identified areas of discussion to be pursued in class and continued discussions that began face-to-face, making them richer.

I did not identify any themes that suggested that the online learning community promoted a surface approach to learning. There are several possible reasons for this. One possibility is that participants who took a surface approach to the online activities did not log in to the learning management system, and therefore the online learning community was irrelevant, having no impact on their learning. Another possible reason for the lack of surface themes was that participants took the workshop voluntarily, and people who were likely to take a surface approach may not have registered for it.

Community of Inquiry and effects of community on learning approach.

The fifth research question looked at the relationship between the Community of Inquiry model and the effects of the learning community on learning approach taken by participants in the workshop.

When mapping the themes from the face-to-face learning community on the Community of Inquiry framework, all three of the presences, social, cognitive, and teaching, were associated with two or more themes. That all three presences were represented indicated that the face-to-face learning community supported a deep approach to learning in a comprehensive way. Teaching presence was related to all of the themes: clarified or reinforced concepts, generated ideas, felt a connection, and felt inspired. The theme that could have potentially led to a surface

approach to learning, discouraged involvement, related to supporting discourse, the intersection of social and cognitive presences.

Social, cognitive, and teaching presences were also associated with promoting a deep approach to learning in the online learning community. This suggested that the online learning community also supported a deep approach to learning in an encompassing way. Results suggested that the online learning community was particularly strong in facilitating cognitive presence for participants in the workshop, with four out of the five themes relating to cognitive presence.

Recommendations for Future Research

The research study has explored the role of community, both face-to-face and online, on the approach to learning taken by participants of a faculty development workshop. The findings have uncovered more questions worthy of investigation. Further research should explore the following areas.

Learning approach and results of learning.

This study has examined the role of the learning community on the approach to learning. The implicit assumption was that a deep approach to learning is preferable in that it would lead to better learning results. My study did not address whether or not people implemented what they learned in their teaching, and if so, the extent to which the changes led to positive results. It would be interesting to know if a deep approach to learning in the workshop led to more successful course designs down the road.

Additionally, it would be interesting to know if a surface approach to learning in the workshop led to favorable outcomes, and if so, what the positive outcomes were. It is possible

that a surface approach to learning had some benefits for participants in the workshop, though this study did not seek to study this and did not uncover any.

Questions for future research.

Possible research questions include the following: To what extent do faculty members exhibiting a deep approach to learning in faculty development programs implement new learning in their teaching practice? When faculty members implement new learning from professional development opportunities into their teaching practice, what is the impact on student learning? What are the outcomes for faculty members who adopted a surface approach to learning in a faculty development workshop? How do faculty members who adopt a surface approach to learning in a faculty development workshop implement new learning into their teaching practice?

Role of community on learning approach.

Much more research needs to be done on the role of the learning community as it impacts on people's approach to learning. My study did not unearth many ways in which the learning community negatively affected participants' learning approach. One possible reason for the lack of themes relating to a surface approach could be that participants were all taking the workshop voluntarily. It is not certain that the results would have been the same if the study looked at a required course, mandatory faculty development, or other educational experiences in which participants had less choice about taking it. It would also be interesting to know if the learning community what impact the learning community has on faculty members who are early in their careers, mid-career, or have a great deal of teaching experience. Another area for future exploration is the role of the learning community in programs that are online only.

Questions for future research.

The outcomes of the study point to questions that can frame ongoing research into the role of the community on faculty members' approaches to learning. Potential future research questions include the following: What effect does the learning community have on participants' approach to learning in mandatory faculty development initiatives? What effect does the learning community have on participants' approach to learning when they are early in their teaching careers, mid-career, and late career? What effect does the learning community have on participants' approach to learning in a solely online faculty development program?

Conclusion

The research study has identified ways in which participants in a blended faculty development workshop demonstrated a deep and surface approach to their learning. It has also explored the role that the face-to-face and online learning communities played in participants' approach to learning. Findings indicated that participants took a deep approach to some tasks, and a surface approach to others. For the most part, the learning community encouraged a deep approach to learning.

The findings also revealed that the face-to-face learning community and the online learning community each supported a deep approach to learning in different ways. Both learning communities played an important and unique role in encouraging participants to adopt a deep approach to learning. Thus, the program appeared to be strengthened by offering it in a blended format.

These findings underlined the importance of the learning community in the blended faculty development workshop. Additionally, they strengthened the claim that blended learning

initiatives can be as effective as or more so than strictly face-to-face programs (Garrison & Vaughan, 2008).

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LIST OF APPENDICES

Appendix A: Pre-workshop Survey

1. Participant # _____
2. Date _____
3. How many **courses** have you taught at the higher education level (including as a Teaching Assistant)? _____
4. How many **years** have you taught at the higher education level (including as a TA)? _____
5. What **faculties** have you taught in (including as a TA)_____

The following questions relate to your views on learning.

6.	I find that at times studying gives me a feeling of deep personal satisfaction.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
7.	I think browsing around is a waste of time, so I only study seriously what's given out in class or in the course syllabus.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
8.	While I am studying, I often think of real life situations to which the material that I am learning would be useful.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
9.	I summarize suggested readings and include these as part of my notes on a topic.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
10.	While I realize that truth is forever changing as knowledge is increasing, I feel compelled to discover what appears to me to be the truth at this time.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
11.	I have a strong desire to excel in all my studies.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
12.	I learn some things by rote, going over and over them until I know them by heart.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
13.	In reading new material I often find that I'm continually reminded of material I already know and see the latter in a new light.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
14.	I feel that virtually any topic can be highly interesting once I get into it.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree

15.	I see myself basically as an ambitious person and want to get to the top, whatever I do.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
16.	I tend to choose subjects with a lot of factual content rather than theoretical kinds of subjects.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
17.	I find that I have to do enough work on a topic so that I can form my own point of view before I am satisfied.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
18.	I try to do all my work as soon as possible after it is assigned.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
19.	I find that studying academic topics can at times be as exciting as a good novel or movie.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
20.	I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
21.	I try to relate what I have learned in one subject to that in another.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
22.	Lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
23.	I usually become increasingly absorbed in my work the more I do.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
24.	I learn best from presenters who work from carefully prepared notes and outline major points neatly on the blackboard.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
25.	I find most new topics interesting and often spend extra time trying to obtain more information about them.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
26.	I test myself on important topics until I understand them completely.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
27.	I believe strongly that my main aim in life is to discover my own philosophy and belief system and to act strictly in accordance with it.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
28.	I find it best to accept the statements and ideas of my instructors and question them only under special circumstances.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
29.	My studies have changed my views about such things as politics, my religion, and my philosophy of life.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
30.	I believe that society is based on competition and schools and universities should reflect this.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree

31.	I try to relate new material, as I am reading it, to what I already know on that topic.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
32.	I keep neat, well-organized notes for most subjects.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree

Thank you for completing this survey!

Appendix B: Post-workshop Survey

1. Participant # _____
2. Date _____

The following questions relate to the sense of community and your learning in the workshop.

3.	I feel that participants in this workshop care about each other.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
4.	I feel connected to others in this workshop.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
5.	I do not feel a spirit of community.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
6.	I trust others in this workshop.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
7.	I feel that this workshop results in only modest learning.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
8.	I feel that I am given ample opportunities to learn.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
9.	I feel that this workshop does not promote a desire to learn.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
10.	The facilitators clearly communicated important workshop topics.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
11.	The facilitators clearly communicated important workshop goals.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
12.	The facilitators clearly communicated important due dates/ time frames for learning activities.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
13.	The facilitators were helpful in guiding the class towards understanding topics in a way that helped me clarify my thinking.	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
14.	The facilitators helped keep the participants engaged and participating in productive dialogue.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
15.	The facilitators helped keep the participants on task in a way that helped me to learn.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree

16.	The facilitators encouraged participants to explore new concepts in this course.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
17.	The facilitators' actions reinforced the development of a sense of community among participants.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
18.	The facilitators helped to focus discussion on relevant issues in a way that helped me to learn.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
19.	The facilitators provided feedback that helped me understand my strengths and weaknesses.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
20.	The facilitators provided feedback in a timely fashion.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
21.	Getting to know other participants gave me a sense of belonging in this workshop.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
22.	I was able to form distinct impressions of some participants.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
23.	Online or web-based communication is an excellent medium for social interaction.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
24.	I felt comfortable conversing through the online medium.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
25.	I felt comfortable participating in the workshop discussions.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
26.	I felt comfortable interacting with other participants.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
27.	I felt comfortable disagreeing with other participants while still maintaining a sense of trust.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
28.	I felt that my point of view was acknowledged by other participants.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
29.	Online discussions helped me to develop a sense of collaboration.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
30.	Problems posed increased my interest in issues raised in the workshop.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
31.	Workshop activities piqued my curiosity.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
32.	I felt motivated to explore content related questions.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
33.	I utilized a variety of information sources to explore problems posed in this workshop.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree

34.	Brainstorming and finding relevant information helped me resolve content related questions.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
35.	Online discussions were valuable in helping me appreciate different perspectives.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
36.	Combining new information helped me answer questions raised in workshop activities.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
37.	Learning activities helped me construct explanations/ solutions.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
38.	Reflection on course content and discussions helped me understand fundamental concepts in this workshop.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
39.	I can describe ways to test and apply the knowledge created in this workshop.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
40.	I have developed solutions to workshop problems that can be applied in practice.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
41.	I can apply the knowledge created in this workshop to my work or other related activities.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree

Short Answer Questions

41. Blended programs involve both face-to-face and online activities. How do you believe face-to-face and online activities can complement each other?

42. Did you participate in any of the online activities for the workshop? If so, describe which ones. How did these activities contribute to the sense of community in the workshop?

43. What other aspects of the workshop contributed to a sense of community?

Thank you for completing this survey!

Appendix C: Questions for First Interview

Protocol for First Interviews

Thank you for participating in the interview today. The purpose of this study is to evaluate how the role of community, both online and face-to-face, affects the ways in which participants approach their learning in a workshop. I want to begin that process by developing an accurate picture of your experiences in the Course Design Workshop.

There are a few housekeeping details to take care of before we begin the session.

First of all, this interview is completely voluntary. You do not have to participate in this study.

You may take a break in the middle of the interview if you wish. Please let me know if you'd like to take a stretch and we'll pause the interview for a few minutes.

The session will be audio recorded. I will be transcribing the audio tapes into text format after the interviews and these transcripts will be available to me and my supervisor, Dr. Qing Li. You will not be identified by name in the audiotapes. Numbers will be used to protect your identity. The audiotapes will be stored for five years after the study, and then destroyed.

I truly appreciate your participation today.

Do you have any questions about the study before we begin?

Participant # _____ , Interview #1

Questions:

In the first part of the interview, I'm curious to know about your learning in the workshop.

1. What aspects of the workshop were most valuable for you and why?

2. What ideas or concepts from the workshop were you able to use in designing your course? Did you adapt these ideas or concepts, or basically use what was presented in the workshop?

3. Were there any parts of the workshop that really helped tie things together for you? (Prompt: theories such as Bloom's Taxonomy)

4. Were you able to interpret any of the discussions about theory in your own course context (course design theory, pedagogical theory)? If so, how helpful was theory in guiding your decisions?

5. Did you have any challenging problems with your course that you gained some new strategies for dealing with them? Any that you couldn't resolve? Did the discussions in class or online help you to generate strategies for these issues?

6. Are there any topics, mentioned or discussed in the workshop, that you want to learn more about, even if you have to pursue them independently?

I'm also wondering about how others in the workshop, both other participants and the facilitators, influenced your learning and the ways in which you were able to contribute to their learning. These next questions focus in on the learning community.

1. How did the in-class discussions contribute to your learning?

2. Did you participate in the online discussions?

a. To what extent did you participate?
b. If so, did you find them helpful?
c. What impeded you from participating further?

3. Did the discussions with the facilitators help you to see any issues in a different way?

4. Were you able to relate your own experiences to others in a way that helped them to analyze an issue in a different way?

5. Did you feel like there was a sense of community in the workshop? In the online discussion board?

Thanks for your participation – I greatly appreciate it!

Appendix D: Questions for Second Interview

Protocol for Second Interviews

Thank you for participating in the interview today. Now that you've had time to reflect and put some of the ideas explored there into practice, I'd like to get your impressions on the workshop.

There are a few housekeeping details to take care of before we begin the session.

First of all, this interview is completely voluntary. You do not have to participate in this study.

You may take a break in the middle of the interview if you wish. Please let me know if you'd like to take a stretch and we'll pause the interview for a few minutes.

The session will be audio recorded. I will be transcribing the audio tapes into text format after the interviews and these transcripts will be available to me and my supervisor, Dr. Qing Li. You will not be identified by name in the audiotapes. Numbers will be used to protect your identity. The audiotapes will be stored for five years after the study, and then destroyed.

I truly appreciate your participation today.

Do you have any questions about the study before we begin?

Questions:

1. Now that some time has passed, what concepts and ideas from the workshop have really stuck with you?

2. Have you designed or taught a course since you took the CD workshop?

3. What changes did you make to your course (design) as a result of taking the workshop?

4. (If they offered the course) Tell me about the resulting changes. In what ways were they successful? What could still be improved?

5. Did you do any follow up after the workshop? For example:
    - One-on-one consultation, online discussion, talk to colleagues or other participants, further reading or research?

6. Were you motivated to investigate any of the concepts or issues discussed in the workshop further? In other words, was the workshop a beginning point for you in exploring course design issues, or an end point?

    - Do you plan on investigating course design issues further? If so, how do you plan on doing this?

7. Did you discuss any concepts or ideas from the workshop with others – for example, colleagues who were not in the workshop? If so, can you please elaborate?

8. Do you think that interaction played an important role in your learning? Please explain.

9. Do you think you played an important role in the learning process for other participants?

Thank you for participating in this interview!

Appendix E: Results for Cross-Tabulation of Selected Survey Questions

Survey Questions by 'I Feel That This Workshop Results in Only Modest Learning'

		I feel that this workshop results in only modest learning.			
		SA + A	**Neutral**	**SD + D**	**Fisher Exact P**
I felt motivated to explore content related questions.	**SA + A**	2 (40.0%)	0 (0.0%)	26 (89.7%)	. 040*
	Not sure	2 (40.0%)	0 (0.0%)	2 (6.9%)	
	SD + D	1 (20.0%)	0 (0.0%)	1 (3.4%)	
I felt comfortable disagreeing with other participants while still maintaining a sense of trust.	**SA + A**	2 (40.0%)	0 (0.0%)	24 (82.8)	.046*
	Not sure	3 (60.0%)	0 (0.0%)	3 (10.3%)	
	SD + D	0 (0.0%)	0 (0.0%)	2 (6.9%)	
I have developed solutions to workshop problems that can be applied in practice.	**SA + A**	2 (40.0%)	0 (0.0%)	25 (86.2%)	.022*
	Not sure	2 (40.0%)	0 (0.0%)	4 (13.8%)	
	SD + D	1 (20.0%)	0 (0.0%)	0 (0.0%)	
I feel that this workshop does not promote a desire to learn.	**SA + A**	1 (20.0%)	0 (0.0%)	0 (0.0%)	.018*
	Not sure	1 (20.0%)	0 (0.0%)	0 (0.0%)	
	SD + D	3 (60.0%)	0 (0.0%)	29 (100.0%)	
Workshop activities piqued my curiosity.	**SA + A**	2 (40.0%)	0 (0.0%)	27 (93.1%)	.015*
	Not sure	2 (40.0%)	0 (0.0%)	1 (3.4%)	
	SD + D	1 (20.0%)	0 (0.0%)	1 (3.4%)	

*Sig at 0.05 level

Survey Questions by Years of Teaching Experience at the Higher Education Level

		How many years have you taught at the higher education level (including as a TA)?			
		0	**1-5**	**6+**	**Fisher Exact P**
Online or web-based communication is an excellent medium for social interaction.	**SA + A**	0 (0.0%)	12 (63.2%)	4 (40.0%)	.081
	Not sure	2 (100.0%)	3 (15.8%)	5 (50.0%)	
	SD + D	0 (0.0%)	4 (21.1%)	1 (10.0%)	
Online discussions helped me to develop a sense of collaboration	**SA + A**	0 (0.0%)	9 (47.4%)	4 (40.0%)	.821
	Not sure	2 (100.0%)	7 (36.8%)	4 (40.0%)	
	SD + D	0 (0.0%)	3 (15.8%)	2 (20.0%)	

*Sig at 0.05 level

Survey Questions by 'I Do Not Feel a Spirit of Community'

		I do not feel a spirit of community.			
		SA + A	**Neutral**	**SD + D**	**Fisher Exact P**
The facilitators' actions reinforced the development of a sense of community among participants.	**SA + A**	0 (0.0%)	1 (25.0%)	24 (88.9%)	.001*
	Not sure	0 (0.0%)	3 (75.0%)	3 (11.1%)	
	SD + D	1 (100.0%)	0 (0.0%)	0 (0.0%)	
I trust others in this workshop.	**SA + A**	0 (0.0%)	3 (75.0%)	26 (92.9%)	.044*
	Not sure	1 (100.0%)	1 (25.0%)	2 (7.1%)	
	SD + D	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Getting to know other participants gave me a sense of belonging in this workshop.	**SA + A**	0 (0.0%)	3 (75.0%)	27 (96.4%)	.022*
	Not sure	0 (0.0%)	1 (25.0%)	0 (0.0%)	
	SD + D	1 (100.0%)	0 (0.0%)	1 (3.6%)	
Online or web-based communication is an excellent medium for social interaction.	**SA + A**	0 (0.0%)	1 (25.0%)	16 (57.1%)	.048*
	Not sure	0 (0.0%)	1 (25.0%)	10 (30.3%)	
	SD + D	1 (100.0%)	2 (50.0%)	3 (10.7%)	
I felt comfortable interacting with other participants.	**SA + A**	0 (0.0%)	4 (100.0%)	28 (100.0%)	.030*
	Not sure	1 (100.0%)	0 (0.0%)	0 (0.0%)	
	SD + D	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Brainstorming and finding relevant information helped me resolve content related questions.	**SA + A**	0 (0.0%)	3 (75.0%)	26 (92.9%)	.025*
	Not sure	0 (0.0%)	1 (25.0%)	2 (7.1%)	
	SD + D	1 (100.0%)	0 (0.0%)	0 (0.0%)	

*Sig at 0.05 level

Appendix F: Samples of Coding – Interview Transcripts

Structural, Descriptive, and Provisional Coding

Structural Code	Transcript	Descriptive Code	Provisional Code
Interaction with diverse group	P: Yeah the workshop overall was very valuable to me. Um...and the thing that comes to the top of mind is really interacting with a diverse group of um...not only professors but graduate students and others. And it was from that perspective very interesting because you um...got an idea of maybe some synergy, so ideas that people were thinking of and I think that if that wasn't there it wouldn't be quite the same. If we were all say from the same group or department, so I think the diversity was um...very valuable and I think it provoked a lot of discussions and a lot of interest in each other. And I think at the end of the three weeks we had kind of a nice bond and relationships going where it was almost like we felt we could help each other. And you know we're thinking about each other. So I mean you know it did do that and I think that the size of it was good; like it wasn't too many people. I mean if you had more than what we had which I believe we had eight or something, then you can't remember people's names and you get confused as to who's with who and whatever. So it was good because you could focus on your fellow participants. So I thought the size was good and I thought the idea of the three workshops spread over three weeks was very effective for time. You know it didn't consume so much of your day and I think the time in between was important to digest and sort of reflect on what you wanted to do. So those would be my top three things. I: Perfect. You mentioned actually a lot of things in there and one of the things you mentioned was that you appreciated having grad students in the session as well. P: Yes.	Deep: interested in learning New perspectives Diversity valuable Bond, relationship Digest, reflect	Diversity New perspectives Help each other
Reflect			

Group interaction	I: So in what way did they add to the discussion? P: Well, they're the innovators and they're the ones that are sort of taking what they know, or what they've been shown or whatever. But they are the new breed of the university. So they're the ones that aren't holding any baggage from the past. They seem to...ah...their minds are free. They're being creative in the design process, so some of the ideas that people were talking about, I was, you know to be honest, I was actually wowed by what they were doing. And I even told them so. I felt inspired by them because, you know, they were really being creative and given the right structure, the design structure, who knows what new innovations will come for teaching and learning from these people. And all of them were so positive, that was the other thing. They were all so positive about being there, so you can't help but think the same.	New ideas Creative Inspired Innovative Positive	Inspired by others Positive - infectious

Longitudinal Coding

Desire to Excel or Improve	
First Interview	**Second Interview**
Number of quotes: 9	Number of quotes: 11
If I could even add in just a couple of little activities for them to do it'll make a huge difference. But it's not like it isn't working, it could just be working better (P12, first interview). It's sort of nice to kind of, if you can, try to work to the top no matter what the level, but sometimes that can be a bit challenging, depending on the students you're teaching (P7, first interview). I've been exposed to it in this workshop and in previous workshops, and I think it needs much more intensive reading (P9, first interview). One of the things that we should aspire to is to be our very best in how we instruct in all	That's what I really wanted to focus on, is applying the new knowledge or new concepts and information directly, immediately, so I'm really trying to take it to a higher level of evaluating, creating, and designing my course (P11, second interview). Not that I didn't have any learning outcomes before that but the ones that I have now are definitely better expressed (P6, second interview). Everyone else was going to teach their course in an upcoming semester but I was in the middle of mine. So it had to be flushed out because I was teaching it. But we would still look at it and try to improve it if possible (P7, second interview).

aspects of life. So I think the workshop idea of designing and tuning and refining and that is critical to the success of any teaching and learning activities here at the university (P14, first interview). If I get feedback from the students about the course, I will try to identify that this was an area for improvement. I now have a context in which I can further develop that (P11, first interview). And I thought, well if I am going to teach these I want to go over the basics and then I want to get up to the application level (P10, first interview). I'm hoping I can learn more about that and improve my teaching skills (P41, first interview). I'm spending about an equivalent amount of time preparing for this course as I did the first time that I taught it, but that's with having a background with a fair amount of material that I'm reusing. And it's taking a fair bit of time because there's a lot that needs to change, and yeah, that's for sure, it takes a lot of time (P6, first interview). Best practices, for me was really interesting because I work in XXXX and we look at student development theory. So it's neat to see the parallels between the literature (P27, first interview).	I knew that this was just the beginning. I have to learn more (P9, second interview). I'm trying to focus on how we do our work and how can we make it better? Because I want to be better at what I do (P11, second interview). I feel like I'm not finished yet. I'm still in that process (P11, second interview). So it was great, the idea of design, the idea of professional development. The idea that you can always improve (P14, second interview). I've been trying to prepare the syllabus for the next semester... It's not just, so this is one section of the course and then we go over here to a different section – so it's consistent – and trying to find ways to keep them really engaged (P12, second interview). That was a really good experience for me in terms of evaluating changes and then doing that as kind of an ongoing process to improve my teaching (P19, second interview). I think the one piece that would have been missing or looked really different would have been the way student work was assessed in the course. I think that was one thing that kind of struck me when I was working through the course (P27, second interview). It's just that it's new to me so I had to also work through it and think that next time around I'll be better at it (P41, second interview).

Increase	Increase in number of comments from first interview to second interview.
Constant	Desire to excel/improve is just as strong in second interview as it is in the first.
Preliminary Assertions	Desire to excel constant or increasing over time. Could indicate that it has nothing to do with the workshop. People may be intrinsically motivated which is why they registered for the workshop originally.

Appendix G: Case Study Protocol

A. Introduction to the case study and purpose of the protocol
    1. Case study purpose: The purpose of the study is to discover how the role of community affects approach to learning in a faculty development workshop in higher education. The research questions are as follows:
        i. In what ways do workshop participants take a deep approach to learning in the course design workshop?
        ii. In what ways do workshop participants take a surface approach to learning in the course design workshop?
        iii. How does the role of the face-to-face learning community affect the approach that participants take to the workshop?
        iv. How does the role of the online learning community affect the approach that participants take to the workshop?
        v. What is the relationship between the Community of Inquiry model and the approach taken by participants in the workshop?
    2. Theoretical frameworks for the case study: Community of Inquiry framework, deep and surface approaches to learning.
    3. Role of protocol in guiding the case study investigator: The purpose of the case study protocol is to provide a standardized process to refer to throughout the data collection activities to ensure consistency and increase reliability of the study.
B. Data collection procedures
    1. Introduction and ethics consent: When invited into the workshop, introduce myself and my study. Discuss my rationale for the study, mention ethics approval, ask if there are any questions, and ask participants to sign a consent form.
    2. Access to participants and site: Access to participants was given by the director of the Teaching & Learning Centre and the facilitators of the Course Design Workshop.
    3. Data collection plan (covers the type of evidence to be expected, including the roles of people to be interviewed, the events to be observed, and any other documents to be reviewed when on site)
        i. Pre-survey: Visit the workshop on the first morning they meet face-to-face. Introduce myself and the study. Distribute the pre-survey at the same time as the consent forms. The pre-survey will be numbered for tracking purposes; participants do not write their names on the surveys. Participants fill out surveys and place them along with the consent form in a file folder near the door before exiting the room for a break. Aim for 30 completed surveys.
        ii. Post-survey: Visit the workshop on the final afternoon that they meet face-to-face. Distribute the post-survey and ask participants to number their survey with the same number as their pre-survey (have list handy in case they've forgotten their number). Participants fill out surveys and place them along with the consent form in a file folder near the door before exiting the room for a break. Aim for 30 completed surveys.

iii. First interview: Schedule the first interview with participants as soon as possible after the end of the workshop. The interview will follow a semi-structured format and will be recorded. Read the interview protocol to the participant and ask if there are any questions. Ask the questions outlined in the protocol and ask if I can have any documents such as an outline of the course outcomes, front-end analysis, course plan, student assessment blueprint, and any other documents the participant created in the workshop. Thank the participant for their time. Aim for eight interview participants.
iv. Second interview: Schedule the second interview with participants four to six months after the end of the workshop, at the participant's convenience. The interview will follow a semi-structured format and will be recorded. Read the interview protocol to the participant and ask if there are any questions. Thank the participant for their time. Aim for eight interview participants.
v. Observations: Check consent forms to see how many participants have given consent for me to observe. If one or more in the group do not provide consent, I will not observe that group. Use observation protocol to make descriptive and reflective notes.
vi. Online discussions: Check consent forms to see how many participants have given consent for me to access online discussions. If one or more in the group do not provide consent, I will not access that group's discussions. For groups in which I have access, copy and paste the threaded discussions into a document for analysis.