Portland State University

PDXScholar

Dissertations and Theses

Dissertations and Theses

Summer 1-1-2012

Understanding the Role of Social, Teaching and Cognitive Presence in Hybrid Courses: Student Perspectives on Learning and Pedagogical Implications

Janelle De Carrico Voegele
Portland State University

Follow this and additional works at: https://pdxscholar.library.pdx.edu/open_access_etds

Part of the [Educational Methods Commons](#), [Educational Psychology Commons](#), and the [Social and Philosophical Foundations of Education Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Voegele, Janelle De Carrico, "Understanding the Role of Social, Teaching and Cognitive Presence in Hybrid Courses: Student Perspectives on Learning and Pedagogical Implications" (2012). *Dissertations and Theses*. Paper 760.

<https://doi.org/10.15760/etd.760>

This Dissertation is brought to you for free and open access. It has been accepted for inclusion in Dissertations and Theses by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

Understanding the Role of Social, Teaching and Cognitive Presence in Hybrid Courses:
Student Perspectives on Learning and Pedagogical Implications

by

Janelle DeCarrico Voegele

A dissertation submitted in partial fulfillment of the
requirements for the degree of

Doctor of Education
in
Educational Leadership: Postsecondary Education

Dissertation Committee:
Christine Cress, Chair
Candyce Reynolds
Becky Boesch
Andrew Job
Martha Balshem

Portland State University
©2012

Abstract

The use of hybrid learning (a blend of face-to-face and distance learning) is rapidly increasing in higher education. However, educational leaders have raised concerns about the proliferation of hybrid programming as an efficiency measure without appropriate attention to learning. This study examined the relationship between social, teaching and cognitive presence, pedagogical design, and students' perspectives on hybrid learning effectiveness. Data from thirty-nine undergraduate courses representing 1,886 students were analyzed to identify indicators of best hybrid practice. Aspects of social and teaching presence significantly influenced students' perceptions of learning, including facilitation of student interactions, assignment feedback and guidance, effective use of class time, and organizational integration of course concepts. Recommendations for hybrid institutional initiatives and programming include attention to framing "presence" in hybrid settings, using integrated inquiry to encourage integrated course design, and encouraging communities of inquiry to promote cross-institutional investigation of hybrid effectiveness.

Acknowledgements

I am indebted to the many mentors, colleagues, friends and family who made this journey possible. My colleagues in the Center for Academic Excellence have provided continual encouragement. Leslie McBride has been a seemingly inexhaustible source of insight and guidance for successfully negotiating a dissertation and the rest of life.

I am deeply grateful to my committee, and to Christine Cress, who is able to support students' success while challenging them beyond their current limits, and who was the first to perceive the dissertation within my assessment responsibilities. Her collaborative approach and mentorship has been truly transformational. I am also deeply appreciative to Candyce Reynolds, Martha Balshem and Becky Boesch for their guidance on this work, and who I am fortunate to have known as inspirational colleagues and educational leaders over many years. Deep appreciation also to Andy Job, with whom I was able to become better acquainted throughout this dissertation process, and admire his insights about online learning, as well as his collegiality.

My parents, Mel and Jeanette DeCarrico have both provided lifelong encouragement, and in particular my mother, drawing from her years of experience in higher education, provided her latest iteration of wisdom about its perils and possibilities. My most excellent husband Tim Voegele has been an oasis of calm, a constant promoter of confidence in my ability to persist, and bringer of delicious, comforting dinners.

I am also thankful to the faculty who graciously welcomed me into their classes, trusted me with the task of gathering feedback from their students, and shared their perceptions of students' experiences. I have learned much from your insights. Last and most

certainly not least, my thanks to the 1,886 students whose observations inform this study, and who allowed me to share in their reflective, illuminating perspectives on hybrid learning.

This work is dedicated to you all.

Table of Contents

Abstract.....	i
Acknowledgments.....	ii
List of Tables.....	vii
List of Figures.....	viii
Chapter One.....	1
Introduction 1	
Can Hybrid Learning Effect Transformative Change?.....	3
A Foundation for Systemic Change: Understanding the Nature of Hybrid Learning	8
The Need for Research on Hybrid Learning	10
The Need for Investigating Hybrid Learning: Summary.....	11
Purpose and Significance of the Study.....	12
Definitions of Primary Terms.....	13
Chapter Two.....	16
Review of Related Literature 16	
Perceptions of Hybrid Learning.....	17
Perceptions of Hybrid Learning: Summary.....	21
Research on Learning in Hybrid Courses.....	22
Community of Inquiry Framework.....	24
Community of Inquiry: Summary.....	36
Research on Hybrid Pedagogical Practices.....	37
Social, Pedagogical, Managerial and Technical Roles.....	37
Pedagogical Practices: Summary.....	42
Hybrid Learning and Constructivist Pedagogical Practices.....	43
Summary and Research Questions.....	50
Chapter Three.....	54
Methodology 54	
Theoretical and Paradigmatic Framework for Research Design.....	56
Research Planning.....	60
Research Site.....	68
Research Design.....	73
Small Group Instructional Diagnosis.....	77
Appropriateness of Existing Data Set.....	81
Data Analysis.....	84
Research Question 1a: Indicators of Presence.....	88
Research Question 1b: Inductive Content and Thematic Analysis.....	92

Cross-Course Comparison.....	98
Research Question 1c: Pedagogical Practices Associated with Presence.....	99
Report to HU Hybrid Participants.....	101
Chapter Four.....	103
Findings 103	
Indicators of Social, Teaching and Cognitive Presence.....	103
Presence by Category and Student Level.....	108
Indicators of Presence: Summary.....	116
Thematic Analysis of Presence Indicators.....	117
Interaction with Peers (Getting to Know You).....	119
Subtheme One: Interaction as Key to Learning.....	119
Subtheme Two: More Interaction.....	120
Subtheme Three: Meaningful Interaction.....	121
Interaction with Peers: Summary	123
Class time as Central to Learning (It's the Real Thing).....	124
Subtheme Four: More Class Time, More Learning.....	125
Subtheme Five: More Time Together.....	126
Class Time as Central to Learning: Summary	127
Perceptions of Blending.....	127
Subtheme Six: Connections Between Formats.....	128
Subtheme Seven: Lack of Connection.....	128
Subtheme Eight: Is This a Hybrid?.....	130
Subtheme Nine: Diverse Reactions to Blending.....	130
Perceptions of Blending: Summary	136
Presence and Learning: Conclusion.....	139
Pedagogical Practices Associated with Presence	139
Pedagogical Practices Associated with Social Presence.....	142
Pedagogical Practice One: Facilitation of Interaction.....	142
Pedagogical Practice Two: Less is More for Interaction.....	143
Pedagogical Practices and Social Presence: Summary.....	144
Pedagogical Practices Associated with Teaching Presence.....	144
Pedagogical Practice Three: Feedback and Guidance.....	144
Pedagogical Practice Four: Organization of Class Time.....	146
Pedagogical Practice Five: Online Organization.....	148
Pedagogical Practices and Teaching Presence: Summary.....	150
Pedagogical Practices Associated with Cognitive Presence.....	151
Pedagogical Practice Six: Direct Instruction, But Not Too Much.....	151
Pedagogical Practice Seven: Professor as Weaver and Interpreter.....	152
Pedagogical Practices and Cognitive Presence: Summary	154
Presence and Pedagogical Implications: Summary.....	154
Integrating Students' Perspectives on Learning and Presence.....	159
Overlapping Meta-themes: Integration and Inquiry.....	160

Nonintegrated/Transmission.....	163
Nonintegrated/Inquiry.....	165
Integrated/Transmission.....	167
Integrated/Inquiry.....	170
Integrated Inquiry: Conclusion	173
Chapter Five.....	174
Discussion 174	
Integration and Inquiry: Implications for Presence.....	174
Is Integration the Most Impactful Facilitator of Social Presence?.....	175
Inquiry vs. Peer Interaction: Implications for Presence.....	176
Peer Interaction and Cohesion: Remaining Questions.....	178
Integrated/Inquiry and Cognitive Presence.....	182
Integrated/ Inquiry and Hybrid Learning: So What?.....	183
Challenges to Facilitating CoI: Insights From Students' Perspectives on Learning.....	185
Recommendations.....	194
Future Research.....	206
Study Limitations.....	209
Conclusion.....	214
References.....	217
Appendices	
Appendix A: Invitation to Participate.....	242
Appendix B: Small Group Instructional Diagnosis Form.....	243
Appendix C: Social, Teaching and Cognitive Presence Coding Matrix	245
Appendix D: Pedagogical Roles Framework.....	247

List of Tables

Table 1:	Interpretivist Approaches to Hybrid Learning Inquiry.....	57
Table 2:	Initial Assumptions About Students' Learning in Hybrid Courses.....	62
Table 3:	Hybrid Courses by College and Level.....	72
Table 4:	Pilot Study: Indicators of Social, Teaching and Cognitive Presence.....	83
Table 5:	Indicators of Presence by Student Level.....	106
Table 6:	Teaching Presence In Large Enrollment Courses.....	107
Table 7:	Social Presence Indicators by Category and Student Level.....	109
Table 8:	Teaching Presence Indicators by Category and Student Level	112
Table 9:	Cognitive Presence Indicators by Category and Student Level.....	114
Table 10:	Students' Perspectives on Presence and Learning	118
Table 11:	Pedagogical Practices Associated with Presence.....	141

List of Figures

Figure 1:	Community of Inquiry Framework.....	25
Figure 2:	Practical Inquiry Model.....	32
Figure 3:	Research Analysis Process.....	86
Figure 4:	Inductive and Deductive Approaches to Content Analysis.....	87
Figure 5:	Example Coding Categorization: Social Presence.....	89
Figure 6:	Cross-course Comparison Theme.....	98
Figure 7:	Course Categories Derived from Integration and Inquiry.....	149
Figure 8:	Nonintegrated/Transmission.....	163
Figure 9:	Nonintegrated/Inquiry.....	165
Figure 10:	Integrated/Transmission.....	168
Figure 11:	Integrated/Inquiry.....	170
Figure 12:	Integrated Inquiry Framework.....	179

Chapter One

Introduction

Ten years ago, the president of Pennsylvania State University called hybrid learning "the single-greatest unrecognized trend in higher education today" (Young, 2002, p. A33). Since that time, the focus on hybrid (also called "blended") learning on college and university campuses has steadily grown. Definitions of hybrid learning most commonly emphasize a blend, or mix of face-to-face and online learning contexts. For example, Graham (2006) defines hybrid learning as "the combination of the instruction from two historically separate models of teaching and learning: traditional face-to-face learning systems and distributed learning systems" (p. 5).

Hybrid learning is not new to postsecondary settings. The use of weekend degree programs joined with online activity, online programs that include occasional face-to-face meetings, and courses that substitute a portion of class work with online group work are just a few examples of hybrid learning that have accompanied the increased use of technology in higher education. What is new is the proliferation of hybrid courses, programming, and initiatives in the last several years. For example, a national survey of over 1,000 colleges and universities found that close to 55% of institutions offer at least one blended course or program, with nearly 75% of the largest institutions (15,000+ students) offering at least one or more blended learning courses or programs (Allen, Seaman & Garrett, 2007), with the numbers expected to steadily increase (Caulfield, 2011).

Several forces of change in higher education have converged and impacted the rapid growth of hybrid learning. The first of these changes is the unprecedented increase in online and communications technology. Increased attention has been focused on the potential of these technologies to attract students and corporate partners, increase student access to education, provide access to educational resources not otherwise available, and further missions related to globalization (Betts, Hartman, & Oxholm, 2010). Colleges and universities are also attempting to respond to incoming generations of students for whom multiple technologies are ubiquitous and commonplace (Oblinger & Oblinger, 2005). Hybrid environments are seen as an opportunity to leverage the potential of innovative technologies while preserving basic traditions of higher education, such as the value placed on face-to-face interaction and classroom learning (Vaughan, 2007).

Another trend impacting hybrid programming is increased student enrollment, at the same time that government funding for higher education has steadily decreased. This places higher education in a difficult position of responding to reduced budgets while accommodating increased student numbers and student diversity. Garrison and Vaughan (2008) observe that “efficiencies are needed to address the cost of higher education while addressing quality concerns ... blended learning offers a way to extend and to enhance the educational experience in an effective and efficient manner” (p. 146). Costs for campus expansion and maintenance have increased substantially over the past decade (Betts, Hartman & Oxholm, 2010), and hybrid learning represents one way to reduce the need for increased infrastructure, while maintaining student presence within the campus community.

The third trend influencing the growth of hybrid learning is the rising pressure on higher education to account for what and how well students are learning. As the costs of education continue to rise, colleges and universities are increasingly held accountable for the quality of teaching and for the relevance of subject matter (Betts, Hartman & Oxholm, 2010; Fink & Fink, 2009). The focus on hybrid learning has intensified as campus leaders respond to criticisms about disengagement stemming from fully online learning as the primary distance alternative. As a result, campuses have increasingly explored additional innovative strategies for cutting costs without sacrificing programming. The challenge for hybrid initiatives, according to Garrison and Vaughan (2008), will be to weather the fiscal challenges while creating opportunities to reexamine the core values of higher education and encourage learner-centered educational practices. "Higher education will be the poorer if the result is to simply deploy blended learning designs to find greater efficiencies but without the commensurate qualitative gains of purposeful collaboration" (Garrison & Vaughan, 2008, p. 148).

Can Hybrid Learning Effect Transformative Change?

Because hybrid learning has evolved within a complex set of technological, demographic, sociopolitical and fiscal challenges, its potential to impact higher education currently faces a critical moment. Hybrid proponents have widely touted its potential to transform college and university campuses, moving them in the direction of student-centered learning and providing experiences that address the needs of 21st century society (Garrison & Vaughan, 2008). Dzuiban, Hartmann & Moskal (2007) have been

among the most persistent voices for the transformative potential of hybrid learning, arguing that "hybrid learning is consistent with a horizontal democracy of learning where classes, instructors, and students behave more like partners rather than masters and apprentices, programs become localized in the sense of worldwide access, and institutions of higher education are forced to collaborate rather than compete ... The primary question becomes, however, how will American higher education respond to the democracy?" (p. 280).

There are some indicators that hybrid courses and programming have impacted traditional, teacher-centered conceptions of education. For example, in some studies on faculty perceptions of teaching in hybrid settings, researchers have documented changes in instructors' pedagogical approaches, characterized as a shift from expert authority to a more facilitative role (Deutsch, 2010; Kaleta, Skibba & Joosten, 2007; Stacy & Weisenberg, 2007). Other studies have documented individual cases of learning described as transformational from students' and instructors' perspectives (e.g., Cooner, 2010).

Approaches to Studying Hybrid Learning for Change

In terms of the potential for hybrid learning initiatives to effect individual and systemic change, one of the most promising research avenues identified by scholars is understanding how hybrid environments support communities of inquiry where students and instructors collaboratively construct meaning, and where students participate in the work of a discipline rather than only learning "about" it (Garrison & Vaughan, 2008;

Shea, 2007; Starenko, Vignare & Humbert, 2007; Swan & Ice, 2010; Zeigler, Paulus & Woodside, 2006).

Some approaches to understanding the change potential of hybrid learning toward more learner-centered practices have focused on dimensions of course organization and design. These approaches attempt to counter what Salomon refers to as "the consistent tendency of the educational system to preserve itself and its practices by the assimilation of new technologies into existing instructional practices" (p. 71). For example, Graham and Robison (2007) identified hybrid courses according to the type and nature of course organization and activity. "Enabling blends" were courses in which the combination of classroom and technology-mediated formats were primarily for purposes of convenience and access. "Enhancing blends" were hybrids undertaken for the purposes of improved pedagogy and more active learning, or were undertaken for purposes of increasing instructor or student productivity. "Transforming blends" were those in which effective hybrid practices were highly integrated throughout multiple dimensions of courses, were deliberately undertaken for pedagogy focused on more engaged learning (p. 90). The researchers expressed concern over the numbers of what they termed "superficial blends" (p. 106), in which the hybrid format was not adding any dimension of significance to effective hybrid teaching and learning practices. They wondered whether these types of hybrids could become stepping-stones to more transformational course practices, or whether they were "final destinations" for integrating technology into teaching.

Other research has focused more specifically on pedagogical elements of online and hybrid courses that promote the potential for deeper learning and engagement.

Examples include investigations into social, teaching and cognitive presence (e.g., Aragon, 2003; Shea, Li & Pickett, 2006; So & Brush, 2008), most of which are consistent with inquiry-based approaches to adult learning (particularly John Dewey's work on community and inquiry), and are grounded in research demonstrating that a sense of community is strongly associated with perceived learning (Garrison, 2007). The community of inquiry framework (Garrison, Anderson & Archer, 2001; Garrison & Vaughan, 2008) is one example of a model for investigating interrelationships between presences in online and partially online learning.

Finally, acknowledging that hybrid instructors' beliefs about teaching may or may not coincide with the underlying epistemological assumptions associated with investigating hybrid settings as communities of inquiry (Shea, 2007), researchers have recently focused attention on the belief systems of instructors in online and hybrid courses. Interestingly, some of this research has also uncovered students' preferences for hybrid environments focused on acquisition of information, rather than collaborative inquiry (Akyol, Ice, Garrison, & Mitchell, 2010). These and other findings point to systemic challenges to the transformative potential of hybrid learning.

Challenges to the Transformative Potential of Hybrid Learning

Given current fiscal and demographic pressures, there are increasing indicators that campuses may be focusing on the potential of hybrid learning "in terms of access and serving more students instead of serving students better" (Garrison & Vaughan, 2008). Similarly, Gumpert and Chun (2005) observe that advances in technology are often "branded a panacea for efficiency, access, and quality, among other ongoing demands on

system design and campus operations” (p. 395). In fact, hybrid initiatives are often framed in terms of the potential to improve learning and the quality of teaching (Shea, 2007). The reality, according to Vignare (2007), is that "by far the number of institutions trying to increase access is much larger than those that started online learning to improve quality" (p. 54). Institutional, systemic changes in priorities and resource allocations directed toward supporting transformative teaching practices and deep learning are difficult to locate (Betts, Hartman & Oxholm, 2010; Garrison & Kanuka, 2004; Garrison & Vaughan, 2008).

Increased access motivated by fiscal challenges has created what some have called a hybrid "Catch 22," meaning that the rise of hybrids can create more resource needs than are gained by the infrastructure benefits or the increased access that hybrid proponents tout as an important benefit (Betts, Hartman, & Oxholm, 2010). For example, the quality of assistance with new technologies is identified as a key theme in faculty satisfaction (or lack of satisfaction) with hybrid teaching, but many institutions already attempting to save resources by adopting hybrid models find it difficult to expend additional resources on increased technology support (Vignare, 2007). The resulting impact on students' learning experiences has been of concern to many scholars, who worry that initiatives focused on access without meaningful initiatives focused on educational quality promote the reinforcement of practices associated with encouraging educational dependency and passivity (e.g., Graham, 2005; Wallace & Young, 2010). Garrison and Kanuka (2004) assert that resources devoted to educational quality in hybrid

initiatives can be resource-efficient, provided that institutions are willing reexamine funding priorities.

Traditionally, higher education priorities connected to technology resources often reflected institutional structures and operating dynamics consistent with research-oriented initiatives. Garrison and Kanuka (2004) observe that this has not been the case for priorities leveraging investigation of new technologies for teaching and learning. They ask, "[w]here is the true spirit of exploration and experimentation when it comes to teaching and learning? ... Little attention and effort is being focused on the challenges of the classroom, increasing expectations, and conceptualizing the properties and potential of blended learning approaches ... neither can we say we have been up to the task of understanding current realities, existing deficiencies, and engaging faculty and students in exploring new and emerging possibilities" (p. 103).

A Foundation for Systemic Change:

Understanding the Nature of Hybrid Learning

A primary challenge for educational leaders attempting to address the institutional pressures outlined above is that very little investigation has been conducted into the nature of learning in hybrid settings (Garrison, Anderson & Archer, 2011; Shea et. al, 2010). Much of the empirical research on student learning in hybrid courses focuses on comparisons of grade achievement and course completion, demonstrating slightly improved achievement or no significant difference (Dzuiban, Hartmann, & Moskal, 2004; Starenko, Vignare & Humbert, 2007; Vaughan, 2007; *U.S. Department of*

Education, 2010). The rest of the research on hybrid learning is dominated by individual case studies focused on one or more specific aspects of course design. While frequently insightful, this research does not provide a larger foundation for promoting and assessing pedagogical practices or programmatic decisions grounded in students' experiences of learning.

Research on students' experiences in hybrid formats has more commonly focused on perceptions of, or attitudes toward hybrids (Dzuiban, Moskal & Futch, 2007; Ertmer et. al, 2010; Woods, Badzinski, & Baker, 2007). This research does not typically inquire into the nature of learning, but often reveals findings related to students' motivation, attitudes and beliefs about hybrid formats, all of which are connected to learning effectiveness (Garrison & Vaughan, 2008). For example, Dzuiban, Moskal and Hartman (2005) surveyed over 200,000 students in hybrid courses over seven years and found that students were satisfied overall with their experiences in hybrid environments. Studies have demonstrated that hybrid learning has increased student-instructor interactions (Riffel & Sibley, 2003), increased students' perceptions of that learning has occurred (Wu & Hiltz, 2004), improved student perceptions of and attitudes toward courses, increased student-to-student interactions, as well as increased attendance and course completion rates (Riffell & Merrill, 2005).

However, equally prevalent are studies noting mixed perceptions of hybrid learning (Goodyear & Ellis, 2007), with millennial generation students reporting less positive attitudes older than older student groups (Dzuiban, Moskal & Futch, 2007). Parkinson, Greene, Kim, and Marioni (2003) found that students in hybrid courses

expressed uncertainty and confusion about course material as well as a lack of class community compared with students in similar face-to-face formats. The most common concerns expressed by students include the use of technology that is perceived as uninspiring or “basic” (Dzuiban, Moskal & Futch, 2007; Mitchell & Forer, 2010), challenges with self-direction and time management (Delialioglu & Yildirim, 2007; Napier, Dekhane & Smith, 2011), and challenges developing a sense of community (Graff, 2003; Jackson & Helms, 2008; So & Brush, 2008).

Although much of this research has implications for pedagogy and course design, researchers acknowledge that conflicting perspectives such as those represented above can serve to confuse, rather than enlighten practitioners unless those perspectives can be contextualized within research on "holistic aspects of the student learning experience, and especially on how well the different components of that experience are integrated, and what this means for learning" (Goodyear & Ellis, 2007, p. 239).

The Need for Research on Hybrid Learning

The time has come for higher education to focus on learning in hybrid settings. Comprehensive understanding of learning in hybrid settings can provide a framework that reframes institutional discourse stemming from the mounting pressures connected to access and fiscal challenges, and can inform institutional efforts toward promotion of practices that support deep learning. Comprehensive knowledge of how hybrid settings can promote the assumed goal of higher education - learner-centered, empowering education that prepares students to be engaged, informed lifelong learners and citizens -

can provide a counter-balance to the inevitable pressures and unspoken norms of efficiency and fiscal exigency. Research on learning should also include investigation of effective pedagogical hybrid practices to supplement "best practice" discussions that are useful, but are largely unconnected to a solid empirical research foundation (Rourke & Kanuka, 2009; Shea et. al, 2012; Vignare, 2007). Understanding students' experiences in hybrid courses is a educational equity concern as well as a pedagogical one, since hybrid programming is increasing far more rapidly in large public institutions (Allen, Seaman, & Garrett, 2007), where often the greatest numbers of returning and traditionally underrepresented students gain access to higher education.

The Need for Investigating Hybrid Learning: Summary

The previous sections have introduced the larger context surrounding the need for more investigation into hybrid learning in higher education. Rapid advances in communication technologies, rising budget constraints, enrollment growth, changing student demographics, increased pressures for accountability, and growing demands for educational quality are compelling higher education leaders to consider new approaches for increasing revenue without sacrificing educational quality. Hybrid learning represents an opportunity for higher education to transform traditional teacher-centered assumptions about learning, providing students with experiences and skills that prepare them to address the needs of society in the 21st century. There are challenges to realizing the potential of hybrid learning to effect transformative change, including institutional structures and operating dynamics reflecting the inevitable pressures and unspoken norms

of efficiency and fiscal exigency. In response, scholars have argued that priority must be placed on comprehensively understanding the nature of learning in hybrid settings, not only to realize the potential for individual and institutional transformation, but also provide a framework for decision-making that recasts institutional discourse stemming from mounting fiscal and demographic pressures.

Purpose and Significance of the Study

Researchers and practitioners have consistently acknowledged the complexities in thoughtful, integrated campus and technology-mediated learning opportunities, and have sought to understand various dimensions of hybrid practices that promote or detract from students' experiences in hybrid settings. More recently, scholars have noted that research on the nature of learning is largely missing from those efforts (Shea et. al, 2010). Scholars are progressing in their understanding of course design elements that appear to impact students' experiences of hybrid courses, such as perceptions of community, but know very little about how these course elements foster learning, beyond comparisons of grade achievement. In response, researchers increasingly advocate investigation into "holistic aspects of the student [hybrid] learning experience, and especially on how well the different components of that experience are integrated, and what this means for learning" (Bluic, Goodyear & Ellis, 2007, p. 239). Comprehensive, research-based knowledge can also provide learning-focused alternatives to institutional discourse stemming from rising pressures connected to access and fiscal challenges.

Based on the assumption that sustained presence, social interaction, collaboration and critical inquiry are central to deep, meaningful learning in higher education, the purpose of this exploratory study was to better understand the role of social, teaching and cognitive presence in students' perspectives on learning in hybrid courses at a large, urban university. Implications for pedagogy emerging from students' learning experiences in the context of presence potentially form a foundation for further investigation into hybrid learning outcomes, as well as provide direction for hybrid leadership efforts toward systemic educational change.

Definitions of Primary Terms Used in This Study

Hybrid Learning

In this study, hybrid learning is defined as “the thoughtful fusion of face-to-face and online learning experiences” (Garrison & Vaughan, 2008, p. 8). This definition is broad, as it does not explicitly address diverse implementation possibilities in the combination of face-to-face and distributed learning contexts. However, this definition appropriately frames an exploratory study of the learning experiences of students in hybrid courses, about which relatively little is known, as well as the pedagogical implications of intentionally integrating classroom and online formats.

Deep Learning

The potential of hybrid settings to foster deep learning has been of concern to hybrid researchers. Deep learning is defined as “a personal commitment to understand ... which is reflected in using various strategies such as reading widely, combining a variety

of resources, discussion ideas with others, reflecting on how individual pieces of information relate to larger constructs or patterns, and applying knowledge in real world situations ... integrating and synthesizing information with prior learning in ways that become part of one's thinking and approaching new phenomena and efforts to see things from different perspectives" (Laird, Shoup & Kuh, 2005, p. 4).

Transformative Learning

Hybrid researchers have also been concerned about the potential for transformative learning in hybrid settings. However, meanings associated with "transformation" in hybrid settings are not well defined in the hybrid learning literature. In this study, transformative learning is characterized by "the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they will generate beliefs and opinions that will prove more true or justified to guide action" (Mezirow, 2000, p. 8).

Pedagogy

This study includes an analysis of effective hybrid pedagogical practices.

"Pedagogy" in this study will be defined as follows:

Pedagogy is the act of teaching together with its attendant discourse. It is what one needs to know, and the skills one needs to command in order to make and justify the many different kinds of decisions of which teaching is constituted. (Alexander, 2003, p. 3)

"Acts of teaching" are assumed to be constituted within discourses and practices that are created, shared and experienced together by teachers and learners.

Additional terminology within the community of inquiry model and related conceptual frameworks informing this study are presented in the following chapter.

Chapter Two

Review of Related Literature

Introduction

Perceptions of social, teaching and cognitive presence have been associated with positive perceptions of learning in online, and more recently, hybrid settings, but research has primarily focused on levels of agreement with predetermined indicators of presence constructs. This study sought to understand how social, teaching and cognitive presence was associated with students' perspectives on what was helping and hindering their learning in hybrid settings, and pedagogical implications stemming from those associations. A review of the literature revealed theoretical and conceptual grounding for the study purpose. Relevant literature was organized into five sections:

1. Research on perceptions of hybrid learning.
2. Research on learning in hybrid settings.
3. Research on social, teaching and cognitive presence within the community of inquiry framework.
4. Research on instructor pedagogical practices in hybrid settings.
5. The role of educational beliefs in online and hybrid learning.

Sections one and two present a foundation for what is currently known about students' perspectives on learning in hybrid courses. Because the community of inquiry model (Garrison & Vaughan, 2008) was used to explore the association between learning and presence in this study, the third section emphasizes the conceptual grounding of the model, its history in researching presence in online courses, and its more recent

application to hybrid settings. Since implications for pedagogical practices were also explored in this study, the fourth section provides a pedagogical roles framework (Berge, 1995; Kaleta, Skibba & Joosten, 2007), for understanding prior research in this area, particularly perceptions of pedagogical practices in hybrid courses. The final section likewise provides a conceptual grounding for the exploration of variations in hybrid pedagogical practices: Prior epistemological beliefs that can exert an active, often unconscious role in the enactment of hybrid course development and pedagogies. Recent investigation into educational beliefs connected to hybrid pedagogical practices is presented. The chapter concludes with the purpose of the current study and research questions.

Perceptions of Hybrid Learning

A concern for many researchers and practitioners has been whether hybrid learning is effective commensurate with face-to-face environments. Survey research has been helpful in identifying common perceptions of hybrid learning across diverse course and program settings. Dzuiban, Moskal and Hartman (2005) surveyed over 200,000 students in hybrid courses over seven years and found that students were satisfied overall with their experiences in hybrid environments. Some of the most common findings across multiple survey studies include reduced student attrition rates (Dzuiban, Moskal & Futch, 2007; Hughes, 2007), and increased interactivity and community among students (Graff, 2003; Greener, 2008; So & Brush, 2008). Multiple studies have also demonstrated the value that students place on reduced travel time and increased flexibility in hybrid courses (Greener, 2008; Mitchell & Forer, 2010; Woods, Badzinski,

& Baker, 2007), while still maintaining some face-to-face contact with peers and instructors (Jackson & Helms, 2008; Napier, Dekhane & Smith, 2011). Studies have demonstrated that hybrid learning has increased student-instructor interactions (Riffel & Sibley, 2003), increased students' perceptions of learning (Wu & Hiltz, 2004), improved student perceptions of and attitudes toward courses, and increased attendance and course completion rates (Riffell & Merrill, 2005).

Other studies have noted mixed perceptions of hybrid learning (Bluic, Goodear & Ellis, 2007), with millennial generation students reporting less positive attitudes than older student groups (Dzuiban, Moskal & Futch, 2007). Comparative studies (research examining how variables change or remain constant in comparable hybrid, face-to-face or online settings) have also revealed mixed perceptions of hybrid formats, but can provide some insight into those reactions. For example, research is mixed regarding students' perceptions of whether hybrid learning enhances or detracts from peer collaboration (Graff, 2003). While some research has documented students' positive perceptions of increased interaction with peers (Jackson & Helms, 2008; Parkinson, Greene, Kim & Marioni, 2003), other studies have revealed students' preferences for additional face-to-face interaction available in classrooms (Meyer, 2007; Mitchell & Forer, 2010). While So & Brush (2008) found students' perceptions of community was attributed to the opportunities for collaboration in the hybrid format, Priluck (2004) found that students in face-to-face course sections were more satisfied with their experiences overall, perceiving greater levels of critical thinking, team building and interaction skills than students in hybrid sections.

Differing Reactions: Student Characteristics

The primary method in comparative research for explaining differing reactions to hybrid learning has been to focus on differences in student characteristics. Differing reactions to hybrid settings have been associated with preferred learning style (Graff, 2003; Napier, Dekhane, & Smith, 2011), differences in family and work responsibilities (Ashton & Elliott, 2007; Parkinson, Greene, Kim & Marioni, 2003), perceived need for face time with instructors (Jackson & Helms, 2008), familiarity with technology and ability to work independently (Holley & Oliver, 2009; Napier, Dekhane & Smith, 2011), approaches to discussion (Ellis & Calvo, 2004), and the nature of previous encounters with distance learning (Mitchell & Forer, 2010). For example, students with greater work and family responsibilities have been found to perceive less community in hybrid settings (Ashton & Elliot, 2007). Students who are relatively new to the college environment report the most challenges with working independently in hybrid courses (Holley & Oliver, 2009). Very little research on the reactions of traditionally underrepresented students, such as students of color or first-generation students, has been conducted. Understanding diverse student responses to hybrid settings, as well as appropriate pedagogical responses, is an area that warrants much further study.

Students' orientations toward learning.

A few studies have explored the role of students' orientations toward learning in hybrid courses. Akkoyunlu & Soylu (2011) found that students whose learning styles were characterized as divergers (Kolb & Lewis, 1986), or learners who thrive on personal involvement with peers and instructors, were more likely to prefer the face-to-face, rather

than online interaction environments. Dzuiban, Moskol & Futch (2007) found that students characterized as "passive dependent," who were sensitive and accommodative of instructors and peers but needed assistance with taking initiative, to be the least satisfied with learning experiences in hybrids. Another perspective offered by Brown, Smith and Henderson (2007) contrasts the perspective of novice and more experienced learners. Their research showed that experienced learners were more likely to value assessment of learning connected to inquiry-based activities, while novice learners were more likely to prefer "objective" assessment such as multiple choice exams, or direct instructor feedback on individual term papers.

Case study insights into students' perspectives.

Individual case studies of hybrid learning have also provided insight into students' perceptions of its value. One finding that overlaps many hybrid case studies is students' perspectives on having some face-to-face contact, both for instructors' viewpoints and perspective (Gulbahar & Madran, 2009; Mitchell & Forer, 2010) and for peer interaction (Ertmer et. al, 2010; De George-Walker & Keeffe, 2010; Meyer, 2007; Napier, Dekhane & Smith, 2011). Another emerging trend across case studies is the tendency for students to comment on the organization and design within and between course formats. Students often request the opportunity to extend ideas from the classroom setting to discussions online (e.g., Greener, 2008). Glogowska, Young, Lockyer and Moule (2011) found that students desired more face-to-face discussion of online work, became more discerning about what material should be addressed in either or both formats, and were increasingly aware of balancing online and face-to-face components. Peer interaction in some courses

is experienced as "more comfortable" in one format or another, with the classroom setting often preferred (Parkinson, Greene, Kim & Marioni, 2003). According to some researchers, this may be due to whether or not the classroom is utilized to create a foundation for developing community online (Garrison & Vaughan, 2008; Meyer, 2007; Napier, Dekhane, & Smith, 2011).

There are challenges with peer interaction and collaboration in hybrid settings. Ellis and Calvo (2004) found that a great deal of class time was needed for students to benefit from discussion, because "more preparation is needed in helping the students to understand how to learn from the experiences of others" (p. 272). Likewise, Ellis, Goodyear, O'Hara & Prosser (2007) discovered that students who did not understand how discussions could help them reflect critically on and revise their ideas tended to devalue peer interaction. Out of class, students have reported that discussions can require too much time (e.g., Meyer, 2003), although the additional time for reflection was regarded as helpful. Overall, the literature on students' perceptions of the value of peer interaction and collaboration in hybrid classes is mixed (Ertmer et. al, 2010; Gulbahar & Madran, 2009; So and Brush, 2008).

Perceptions of Hybrid Learning: Summary

Research on students' experiences of hybrid learning has demonstrated consistent perceptions of overall satisfaction, interaction with peers, and flexibility. Challenges include motivation for self-direction and developing a sense of community. In fact, the literature is often most conflicted related to perceptions of collaboration, course

community, peer and instructor interaction, and course activities (such as discussion) in hybrid settings. While studies on students' perceptions of hybrid learning has provided some useful information about conditions and practices that students perceive to be most and least effective, they do not provide significant insight into the complex nature of the hybrid learning process. The following section summarizes research focused on learning, with an emphasis on more recent trends examining specific dimension of students' learning experiences.

Research on Learning in Hybrid Courses

According to Vignare (2007), research focused specifically on the nature of student learning in hybrid environments is difficult to find and ambiguous. Most of this research focuses on grade achievement and course completion, demonstrating slightly improved achievement for hybrid courses over face-to-face or fully online settings, or no significant difference (e.g., Dzuiban, Hartmann, & Moskal, 2004; Starenko, Vignare & Humbert, 2007; Vaughan, 2007). Research focused on specific variables, such as students' performance on particular tasks or students' performance on course activities across formats is more inconclusive. For example, although a meta-analysis of hybrid, face-to-face and online courses (*U.S. Department of Education*, 2010) showed that overall achievement in hybrid courses was just as effective or more effective than fully face-to-face or online environments, outcomes on some individual measures and tasks were lower in several hybrid courses than for their face-to-face counterparts.

A more recent trend in case studies has been a focus on how hybrid learning formats can enhance thinking skills, professional skills, and cognitive outcomes. For example, Cooner (2010) examined undergraduate social work students' experiences in developing reflective skills during critical stages in their learning, and found that although grade achievement remained overall the same as previous face-to-face versions of the course, the purposeful integration of online and face-to-face activities increased students' abilities to "reframe and reinterpret existing knowledge, values and beliefs to assess the impact these may have on their professional practice" (p. 271). Davies, Ramsay, Lindfield and Couperthwaite (2005) studied a hybrid model for educating physiotherapy students in developing neurological observational skills, and concluded that students' analytical skills in the context of neurological observation improved, as well as their preparation for and performance in clinical placement. Although studies focused on such learning outcomes are rare, the findings form a potentially valuable backdrop for comparison to students' perceptions of cognitive presence in the current study.

According to Bluic, Goodyear and Ellis (2007), the variability of findings on learning outcomes can be partially explained by the relative immaturity of research on hybrids in postsecondary settings, compared to other more established fields of study into students' learning. The research is thus in "exploratory mode ... a substantial portion of the literature is written by teachers researching their own innovative educational practice" (p. 232). The researchers thus advocate for "research into blended learning that focuses on the *combination* and *integration*, rather than the *contrasting*, of technology-supported

learning and other contexts and opportunities for learning" (Bluic, Goodyear & Ellis, 2007, p. 232). (*Italics theirs*). One emerging research model for investigating the integration of dimensions of learning in hybrid settings is the community of inquiry model (Garrison, Anderson & Archer, 2001; Garrison & Vaughan, 2008).

Community of Inquiry Framework

Garrison, Anderson and Archer (2000) first introduced the community of inquiry model (CoI) to help explain and explore interactive online educational experiences. Traditional distance education often assumed that students would work independently, but as interactive opportunities, such as discussion forums, became more common, educators and researchers sought to better understand the issues and dynamics of collaborative online learning. Garrison and Vaughan (2008) argue that “[f]rom both theoretical and empirical perspectives, there is little question as to the necessity and effectiveness of interaction and collaboration to achieve deep and meaningful learning outcomes” (p. 31). More recently, researchers have begun to adapt the model to better understand the how the connection between face-to-face and online learning might boost potential of hybrid formats to function as interactive communities of inquiry (Garrison, Anderson & Archer, 2010; Garrison & Vaughan, 2008). Figure 1 illustrates the three principle interactive elements of the CoI model:

The CoI conceptualizes teaching and learning in terms of three overlapping components: social presence, teaching presence and cognitive presence. Social presence is defined as “the ability of participants in a community of inquiry to project themselves socially and emotionally, as “real” people (i.e., their full personality), through the medium of communication being used” (Garrison, Anderson & Archer, 2000, p. 94). Teaching presence is “the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson, Rourke, Garrison & Archer, 2001, p. 5). Cognitive presence refers to “an environment that enables learners to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry” (Garrison, Anderson & Archer, 2001, p. 11).

The CoI was initially developed as a framework for exploratory, descriptive studies aimed at understanding the dynamics of collaborative learning online (Garrison & Arbaugh, 2007). Toward that end, a number of early qualitative studies using content analysis examined transcripts of students' online discussions (e.g., Aragon, 2003; Arbaugh, 2001; Garrison & Cleveland-Innes, 2005; Shea, Li & Pickett, 2006). The result was a better understanding of the various observable elements making up the three components of the framework, which evolved into the development of survey items designed to measure the three presences, as well as their interrelationships (Garrison, Anderson & Archer, 2010). This instrument has been validated in a number of studies (Garrison, Cleveland-Innes & Fung, 2010), including one in which a sample of 713 undergraduate and graduate students from four universities rated and confirmed the importance of the survey items, as well as the hypothesized relationships between the three presences (Diaz, Swan, Ice & Kupczynski, 2010).

Conceptual Grounding for CoI: Social Constructivism

The CoI model is intentionally grounded in social constructivist views on learning (Garrison, Anderson & Archer, 2000). Social constructivism focuses on the central role of social interaction in the construction of meaning, regarding “individual subjects and the realm of the social as indissolubly connected ... the social constructivist model of the world is that of a socially constructed world which creates (and is constrained by) the shared experience of the underlying physical reality” (Ernest, 1994, p. 8). This view on learning acknowledges that every student brings his or her own personal history, experiences and meaning system into every learning situation, that learning is grounded

in social practices such as dialogue (Fenwick, 2000), and that learning is participatory and emergent, rather than given to students through transmission (Sfard, 1998). Social constructivist views on learning thus evoke metaphors less focused on transmission and more on connection (Clinchy, 2000), implying a view of education that “would cultivate connections among students, between students and teachers, and between students and their work” (p. 33). Speaking of hybrid learning in a similar way, Garrison and Vaughan (2008) argue that “collaboration on a deeper and meaningful level requires a qualitative shift in interaction to focus on the shared purpose of the learning experience ... [t]he power of a blended learning design is that one can design face-to-face activities that lay the foundation for social presence. Online activities will then sustain social presence in the support of collaborative activities” (p. 39).

In addition to social constructivist views on learning, the CoI model is grounded in John Dewey’s philosophy of the importance of community and inquiry, as well as his ideas on practical inquiry (Dewey, 1938). Noting the influence of Dewey’s work on the development of the CoI model, Garrison and Vaughan (2008) observe that “Dewey strongly rejected dualism and argued that the value of the educative experience is in unifying the internal and external worlds” (p. 14). Garrison, Anderson and Archer (2010) further emphasize the social nature of this unifying process, arguing that “Dewey believed that inquiry was a social activity and went to the essence of the educational experience” (p. 6). Further, it is Dewey’s emphasis on learning in community, and his notion of practical inquiry, that serves as conceptual grounding for the CoI model, particular the concept of cognitive presence (Swan & Ice, 2010). The community of

inquiry model thus emerged as a “dynamic process model designed to define, describe and measure elements supporting the development of ... learning communities” (Swan & Ice, 2010, p. 1). The following section outlines the genesis of the three major components of the CoI model, concluding with a discussion of research relevant to this study.

Social Presence

Social presence, considered a key component of an instructor’s pedagogical and social roles (Kaleta, Skibba & Joosten, 2007), has long been of interest to online learning researchers, due to concerns over whether online environments could adequately facilitate social interaction between teachers and learners. However, early research on social presence in online environments demonstrated the capacity of these environments to support highly affective interpersonal interactions (Angeli, Bonk & Hara, 1998; McDonald, 1998; Rourke, Anderson, Garrison & Archer, 2001).

Early definitions of social presence rooted the term within the concepts of intimacy and immediacy (Gunawardena & Zittle, 1997). Intimacy is defined in terms of an interconnected set of nonverbal factors, such as facial expression, smiling, tone of voice, physical distance, and characteristics of the environment in which individuals interact. Immediacy refers to the degree of perceived psychological distance between communicators (Gunawardena & Zittle, 1997, p. 9). From this perspective, social presence is defined as “the degree to which a person is perceived as a ‘real person’ in mediated communication” (p. 9).

In addition to conceptions of social presence rooted in the constructs of intimacy and immediacy, Biocca, Harms & Burgoon (2003) note a wide range of definitions including the physical presence or absence of another, sense of access to intelligence, mutual awareness, perception of psychological involvement, the salience of interpersonal relationships, mutual understanding, and behavioral engagement. The latter four definitions in particular reflect a more recent trend toward defining social presence less in terms of proximity, and more in terms of psychological distance, including perceptions of connectedness, belonging and becoming a member of a community (Aragon, 2003; So & Brush, 2007; Swan & Ice, 2010). In light of this trend, the CoI model has been widely adopted and adapted by researchers to inform their understanding of social presence, as well as the relationship of social presence to other variables in online and hybrid learning.

The three main elements of social presence in the CoI model are open communication, group cohesion and affective/interpersonal interaction (Garrison & Vaughan, 2008). "Open communication" refers to an environment that is perceived as enabling risk-free expression, comfortable peer-peer interaction, and perceptions that the classroom and online formats are both comfortable places for peer interaction and participation. "Group cohesion" refers to discussions and activities that encourage collaboration, comfort with expressing one's opinion and listening to others, and an environment that encourages the expressing of and listening to diverse opinions. Finally, "affective/interpersonal interaction" refers to perceptions of trust and effective intergroup communication, expressing emotions and camaraderie, and perceptions of belonging to a course community (Garrison & Vaughan, 2008).

According to Garrison, (2007), the community of inquiry model contributes to an understanding of social presence by treating the concept as interdependent with cognitive and teaching presence, as it is “at the intersection of social and cognitive presence where the primary issue of concern emerges ... [a] sense of community is based upon common purposes and inquiry ... social presence is of less importance if the learning activities are information acquisition and there are no collaborative assignments where students can benefit from the perspectives of others” (p. 63). For example, social presence indicators of group cohesion are significantly associated with perceived learning outcomes (Swan & Shih, 2005).

Teaching Presence

Anderson, Rourke, Garrison and Archer (2001) identified three components comprising teaching presence: instructional design and organization, facilitating discourse, and direct instruction. “Instructional design and organization” refers to the design of course structure, process, interaction and evaluation. When planning for an online or partially online course, “instructors need to be more explicit and transparent because social cues and norms of traditional classrooms are absent” (Garrison & Arbaugh, 2007 p. 163). “Facilitating discourse” focuses on the “means by which students are engaged in interacting about and building upon the information provided in the course instructional materials” (Garrison & Arbaugh, 2007, p. 163). Activities involved in facilitating discourse include reviewing and commenting on students’ responses and contributions, providing regular feedback, raising questions and/or making observations with the goal of moving inquiry in particular directions, encouraging reluctant students,

and minimizing actions or responses that might negatively impact classroom climate or learning (Xin & Feenberg, 2006). “Direct instruction” refers to the process of sharing subject matter knowledge, as well as providing scholarly and intellectual leadership (Anderson, Rourke, Garrison & Archer, 2001). Activities include diagnosing comments for accurate understanding, providing sources of information, guiding discussions in productive directions, facilitating critical reflection, and providing content-specific assessment and feedback (Garrison & Arbaugh, 2007). It is important to note that in the context of the community of inquiry, actions reflective of teaching presence are not necessarily the sole responsibility of the instructor; rather, “all participants assume teaching and learning roles and responsibilities to varying degrees” (Akyol & Garrison, 2011).

Research on teaching presence in online learning has demonstrated its importance to students’ perceived learning (Finegold & Cooke, 2006; Garrison & Cleveland-Innes, 2005), student satisfaction (Dixon, Kuhlhorst & Reiff, 2006; Swan & Shih, 2005; Xin & Feenburg, 2006) and student perceptions of community (Shea, Li & Pickett, 2006; Xin & Feenburg, 2006). The importance of teaching presence in facilitating increased cognitive presence among students has also been of concern to researchers, an area of research that will be discussed further in the following section.

Cognitive Presence

Within the CoI model, cognitive presence is comprised of repeated cycles of practical inquiry in which participants move from an understanding of a problem or issue to exploration, integration and resolution (see Figure 2).

Garrison, Anderson and Archer (2001) described the practical inquiry process as beginning with a triggering event, where an issue or problem is identified as meriting further inquiry; exploration, in which students explore the issue or problem both individually and in groups through critical reflection and discussion; integration, where students create meaning and synthesize ideas developed during exploration; and resolution, in which students apply knowledge to relevant contexts. Garrison and Archer (2003) observed that in practice, the phases of the inquiry process may overlap or occur repeatedly, in multiple stages. Garrison, Anderson and Archer (2001) argued that increased teaching presence is needed during the integration phase so that students are encouraged toward higher levels of critical thinking and the development of ideas as they progress to the resolution stage. One issue common to research on cognitive presence is that students often find it difficult to progress further than the exploration stage (Garrison

& Arbaugh, 2007). In fact, inconsistent results from studies of cognitive presence have been some of the most perplexing for CoI researchers. In a review of empirical research on cognitive presence, Rourke and Kanuka (2009) concluded that "[s]tudents engage only in the lower levels of the practical inquiry process (triggering events and exploration); instances of engagement in the higher levels (integration and resolution) are rare, and examples of groups of students engaging in a full cycle of cognitive presence have not been documented" (p. 23). Several researchers have speculated that this may be due to interaction with aspects of teaching presence (Celentin, 2007; Meyer, 2003; Murphy, 2004). For example, Meyer (2003) found that integration and resolution are more demanding than exploration, necessitating more time for reflection and more directed facilitation from instructors. Considering these and similar findings, Garrison and Arbaugh (2007) argue that "if the activity or problem is case-based, clear expectations are given, and appropriate teaching presence is provided, participants in a community of inquiry would not have difficulty moving to resolution" (p. 162). To date, there is limited scholarship to substantiate this claim, but early findings demonstrate the role of teaching presence on students' achievement in integration and resolution (Akyol et. al, 2009; Bangert, 2008; Garrison, 2008; Pisutova-Gerber & Malovicova, 2009).

Cognitive presence and deep learning.

A particularly notable recent approach to studying cognitive presence is Akyol & Garrison's (2011) investigation of learning approaches and learning outcomes associated with online and blended communities of inquiry. To investigate the processes and outcomes of social, teaching and cognitive presence, the study applied a mixed methods

approach, using interviews, transcript analysis, measures of perceived learning and satisfaction, and assessed learning outcomes. Findings demonstrated that students in hybrid courses who reached high levels of cognitive presence also achieved higher order cognitive learning outcomes. These results provided evidence associating cognitive presence and assessed learning outcomes. The researchers concluded that future scholarship should continue to investigate cognitive presence and the nature and quality of learning.

Relationships Between Social, Teaching and Cognitive Presence

Much of the research utilizing the CoI model has focused on one or more of the individual presences, or on the CoI framework generally (Diaz, Swan, Ice & Kupczynski, 2010), rather than the interrelationship between the presences. More recently, researchers have sought to address this gap and examine the presences in connection to one another. Several findings from this line of research are of potential relevance to the current study. First, as discussed in the previous section, an increasing number of studies confirm the central role of teaching presence as directly influencing students' perceptions of social and cognitive presence (Arbaugh, 2005; Garrison, Cleveland-Innes, & Fung, 2010; Swan & Shih, 2005). Students' perceptions of teaching presence are also associated with a strong sense of involvement in a learning community (Meyer, 2003; Shea, Li & Pickett, 2006). These and similar findings "point to the key role of teaching presence in establishing and sustaining a community of inquiry as suggested by the [CoI] framework" (Garrison, Cleveland-Innes & Fung, 2010, p. 35). At the same time, Garrison and Vaughan (2008) advocate for a balanced approach to establishing teaching presence,

noting that too much directed facilitation can work against the goal of students developing skills as self-directed learners. They argue that more research into the nature of teaching presence in hybrid contexts is needed to understand the nature of this balance.

Another line of inquiry relevant to the current study is that which explores the relationship between social presence, perceptions of learning, perceptions of community, and satisfaction with the learning experience. For example, So and Brush (2008) found that students in a blended course perceived higher levels of collaboration and satisfaction when they also perceived high levels of social presence. Interestingly, social presence and overall satisfaction were not as strongly correlated as social presence and collaboration. This finding is at odds with previous studies in online environments that found indicators of social presence to be a strong predictor of overall course satisfaction (e.g., Aragon, 2003). However, So and Brush's study is one of the small number of studies investigating the CoI model in hybrid, rather than online settings. It may be that the significance and nature of social presence is perceived differently in hybrid and online settings.

Perceptions of social presence also significantly predict perceptions of cognitive presence (Garrison, Cleveland-Innes & Fung, 2010), and are therefore proposed as “a mediating variable between teaching and cognitive presence” (p. 35). Garrison and Arbaugh (2007) suggest that “although social presence alone will not ensure the development of critical discourse ... it is extremely difficult for such discourse to develop without a foundation of social presence” (p. 159). However, although many studies hypothesize a relationship between perceived social presence, perceptions of community,

and positive impacts on student learning, the influence of social presence on learning outcomes is not yet well known (Garrison & Vaughan, 2008). Interestingly, there is some evidence that social presence is associated with more rapid mastery of the “hidden curriculum” of the technological aspects of online education (Anderson, 2002; Benbaum-Fich & Hiltz, 2003).

Community of Inquiry: Summary

The community of inquiry has emerged over the past decade as a descriptive framework to understand how social, teaching and cognitive presence function together in online environments to promote collaborative communities of inquiry, consistent with learner-centered, constructivist approaches to adult education. The overlapping components of social, teaching and cognitive presence offer an integrated approach for understanding how students' perspectives on learning and various related experiences in hybrid settings are interconnected. The resulting perspective on how the parts of the educational environment synergize within a greater whole is an advantage to what some researchers call a more holistic approach to studying hybrid learning (Bluić, Goodyear and Ellis, 2007).

The research summarized above raises implications for pedagogical practices in hybrid courses. Bonk, Kim and Zeng (2006) argue that “[b]lended learning highlights the need for instructional skills in multiple teaching and learning environments” (p. 564). Indeed, scholarship on hybrid learning has also emphasized the importance of understanding pedagogical practices that encourage achievement in hybrid settings

similar to that of face-to-face settings (Kaleta, Skibba & Joosten, 2007; Shea, Li & Pickett, 2006; Skibba, 2005). More recently, scholars have called for research on the role of faculty in facilitating deeper levels of student learning in hybrid environments (Garrison & Vaughan, 2008; Cooner, 2010). Since pedagogical practices associated with successful hybrid courses (such as the thoughtful integration of classroom and computer-mediated activities) depend for the most part on faculty, increased attention has been focused on the multiple roles that faculty assume when teaching hybrid courses (Akyol, Ice, Garrison & Mitchell, 2010; Garrison & Vaughan, 2008; Stacey & Wiesenber, 2007).

Research on Hybrid Pedagogical Practices

As instructors transition face-to-face courses to the hybrid format, significant attention to reevaluating course structure, activities, goals, assessment and communication strategies is often needed. Descriptive frameworks of the roles required of instructors as they begin the process of hybrid teaching illuminate the significant pedagogical changes that often accompany this transition (Kaleta, Skibba & Joosten, 2007).

Social, Pedagogical, Managerial and Technical Roles

Berge (1995) developed a four-part roles framework to assist in the development and enhancement of online computer conferencing and course work, describing the social, pedagogical, managerial and technical roles that instructors assume when teaching online, and are described in the following sections.

Social role.

The social role involves creating a welcoming and inclusive environment that supports a community of learners. Aspects of this role include facilitating instructor-student and student-student communication, personalizing communication, building trust, showing empathy, and humanizing interactions.

Pedagogical role.

The pedagogical role involves the design, implementation and facilitation of learning activities. Examples of this role include providing resources, integrating classroom and online activities, facilitating discussion, offering guidance and direction, asking questions, encouraging critical reflection, and assessing student work.

Managerial role.

The managerial role is defined in terms of activities related to overseeing course structure and coordination, including setting expectations and instructions for activities, clarifying course policies, managing grading, establishing due dates and time schedules, coordinating assignments, and assigning group and/or student roles.

Technical role.

The technical role relates to managing and supporting the course technology. This involves the ability to use a course management system to organize the course, orient students to the online course environment, provide content and resources, communicate with students using technology, and assist students with technology issues.

Berge's (1995) roles framework has primarily been used as a framework to provide suggestions for online course design, and although scholars agree that it

translates well to the hybrid environment (Kaleta, Skibba & Joosten, 2007), very little research into pedagogical practices has been conducted in the context of hybrid teaching (Bonk, Kim & Zeng, 2006; Garrison, Anderson, & Archer, 2010). To address this gap, Kaleta, Skibba and Joosten (2007) utilized an adaptation of Berge's (1995) framework to conduct in-depth interviews with faculty transitioning face-to-face courses to hybrid format, noting that in the sparse literature on faculty experiences with hybrid instruction, the balance between online and classroom roles appeared particularly challenging.

Social Role in Hybrid Settings

Faculty in Kaleta, Skibba and Joosten's (2007) study expressed challenges associated with the social role in hybrid formats. They felt the need for more guidance in how to facilitate a sense of community and open communication in the combined format, as well as how to facilitate more respectful and meaningful online discussions. They also acknowledged the potential of hybrid courses to create community and collaboration among students, noting that some students were more open and participatory online, and that more students had the opportunity to contribute to discussion. The importance of the social role in hybrid courses is mirrored in the literature on social presence: According to Kaleta, Skibba and Joosten (2007), scholarship in the area of social presence reveals that "when a positive climate is created, hybrid environments have the potential to increased and extend connectivity and to build relationships even more so than in traditional or online courses" (p. 129).

Pedagogical Role in Hybrid Settings

Faculty also reported a sense of transition to the hybrid pedagogical role, particularly their approaches to course development and teaching style. All faculty in this study described aspects of their role as teacher that changed in the hybrid format, including metaphorical descriptions such as a shift from lecturer to "cheerleader" or "guide." On the other hand, they also noted that these shifts were not necessarily easy, due to adjustments that both students and instructors needed to make in the process: both "faced challenges in renegotiating teacher-learner relationships" (Kaleta, Skibba & Joosten, 2007).

Managerial Role Hybrid Settings

The managerial role likewise created opportunities for new teaching approaches, as well as adjustments to course organization challenges. Findings indicated that faculty perceived a need to be more organized, and that students similarly needed to be more prepared to participate than was often the case in the face-to-face version of courses. Although faculty appreciated the flexibility that the course format provided for overburdened students, they also felt that many students became confused navigating both formats, and some were challenged by fostering the self-responsibility required for independent work. Both faculty and students were challenged by the time commitment that the online work required; however, a few faculty "felt that the hybrid format should go beyond teaching students content to teaching important 'life skills' of time management, self-discipline and organization" (Kaleta, Skibba & Joosten, 2007, p. 132).

Technological Role in Hybrid Settings

Faculty experienced both excitement and stress in the technological role. As they assumed the role of technical expert and troubleshooter, "study participants who had not previously taught with technology became 'stressed' with learning how to use the technology themselves and then dealing with student technology issues and 'fears'" (Kaleta, Skibba & Joosten, 2007, p. 133). Challenges also included the reliability of technology, lack of adequate support for students' problems with technology, and frustration with technology issues that negatively affected students' and instructors' course experience. Participants also reported the benefits technology provided to the course structure, such as the ability to incorporate more interactive activities, and to communicate easily with more students.

Related Research on Faculty Roles and Pedagogical Practices

The findings related to faculty roles in hybrid courses resonate with a small number of research studies on faculty experiences with hybrid teaching. For example, Ocak (2010) interviewed 117 faculty about challenges they experienced with hybrid teaching, many of whom had stopped teaching in hybrid formats at the time of the study. Study results revealed that the complexity of teaching and adapting to new roles were experienced as primary challenges perceived by faculty. Myerton (2006) also studied faculty experiences with hybrid environments. Thematic analysis from in-depth interviews revealed some fear and anxiety over technological (and resulting pedagogical) disruptions, students' attitudes toward technology, and the possibility of poor course evaluations. However, faculty in this study also appreciated the opportunity that the

hybrid format afforded for them to monitor students' progress more closely and provide timely guidance, as well as the opportunity to shift to more of a collaborative role. These findings illustrated how experiences with technology impacted instructors' pedagogical and social roles, as well as technological roles. Similarly, the participants in Duetch's (2010) study of faculty experiences with technology in hybrid formats clearly appreciated the increased social interaction that resulted within hybrid courses, observing that this increased the quality of learning for many students. Faculty in this study also mentioned the extraordinary time commitment required to facilitate hybrid courses, with the time savings associated with less classroom work more than counter-balanced by the time commitment required to organize and facilitate both formats (p. 90). Additional studies, including case studies featuring faculty reflections on experiences with hybrids, have revealed similar pedagogical themes (Cooner, 2010; Napier, Dekhane & Smith, 2011; Starenko, Vignare, & Humbert, 2007).

Pedagogical Practices: Summary

In summary, a small but increasing body of research on faculty experiences in hybrid settings has contributed to an understanding of the nature of the social, pedagogical, managerial, and technological roles required in these settings, as well as the pedagogical opportunities and challenges related to enacting these roles. What is less clear from the research in this area is how these roles intersect with one another, how interaction with and between students impacts the components of each role, or how pedagogical practices associated with these roles function to facilitate collaborative,

learner-centered course environments (Garrison, Anderson & Archer, 2010; Garrison & Vaughan, 2008).

In discussions on hybrid learning, a recent common theme in both the community of inquiry and pedagogical roles literatures has been the potential influence of underlying epistemological beliefs about teaching and learning on the part of instructors and students (e.g., ; Garrison, Cleveland-Innes & Fung, 2010; Kaleta, Skibba & Joosten, 2007).

Consequently, recent attention has turned to examining underlying beliefs associated with constructivist pedagogical approaches. Researchers observe that transitioning to more facilitative roles implies a potential epistemological shift in beliefs about how learning occurs in relation to inquiry, and have also observed that not all hybrid courses may be designed as embracing the collaborative, constructivist philosophical premise of the community of inquiry framework (Akyol, Ice, Garrison, & Mitchell, 2010). It is therefore important for a study focused on hybrid course students' perceptions of learning (presumably informed by their own and instructors' beliefs about learning), be informed by the growing research in this area.

Hybrid Learning and Constructivist Pedagogical Approaches

Hybrid researchers acknowledge that "a consensus concerning the importance of and congruence between online learning and collaborative constructivist approaches to teaching and learning has emerged" (Garrison, Cleveland-Innes & Fung, 2010, p. 31). As discussed above, Berge's (1995) roles framework assumes a pedagogical shift on the part of instructors when teaching online that represents a more facilitative, rather than

transmission approach to organizing and teaching courses. Similarly, the community of inquiry framework is intentionally grounded in social constructivist views on learning (Garrison & Vaughan, 2008). However, recognizing that many hybrid courses and programs do not embrace these collaborative, constructivist approaches, hybrid researchers are also beginning to acknowledge the potential impact of instructor beliefs and epistemological orientations on hybrid teaching and learning, noting the lack of research attention in this area (Akyol, Ice, Garrison & Mitchell, 2010; Shea, 2007). The following section discusses the relationship between instructor epistemological beliefs and approaches to teaching, concluding with a summary of studies that have explored instructors' beliefs in the context of hybrid teaching.

Instructor Epistemological Beliefs and Pedagogical Practices

For over two decades, adult education scholars have emphasized the importance of critical reflection on one's teaching, and of having a clearly articulated teaching philosophy (e.g., Brookfield, 2005; Goodyear & Allchin, 1998; Lattuca & Stark, 2009). Zinn (2004) argues that evidence from several disciplines suggest "some positive relationship between an individual's beliefs, values or attitudes and the decisions and actions that make up one's daily life ... [w]hen the adult educator engages in the practice of education, certain beliefs about life in general are applied in practice " (p. 40). These "beliefs about life in general" form the basis for one's philosophy of education, whether this philosophy is recognized formally, partially recognized, or primarily unrecognized. Beliefs and values related to education may be influenced by numerous schools of thought. A transmission-oriented approach, emphasizing the transfer of information from

teacher to student, contrasted with an approach that focuses on individual learners and their construction of meaning, are just two underlying conceptions of teaching that may predominate within individuals and groups. “To a greater or lesser extent, in more or less obvious ways, purposes and methods of education emerge from individual and/or shared perceptions of how things are and how they should be” (Zinn, 2004, p. 41).

According to Zinn (2004), the relationship between adult educators’ beliefs and application to practice can be seen in the myriad of possible pedagogical practices, including giving information during lecture, facilitating an inquiry process, guiding learners to appropriate resources, or mentoring individuals in the process of becoming self-directed learners, among many other possibilities. “In all of these cases, adult educators make decisions and act according to what they believe is appropriate” (Zinn, 2004, p. 41). In addition to pedagogical practices, increasing attention has also been focused on teaching style, defined as “the operational behavior of the teacher’s educational philosophy” (Zinn, 2004, p. 55).

Conti (2004) argues that “[b]ecause teaching style is comprehensive and the overt implementation of the teacher’s beliefs about teaching, it is directly linked to the teacher’s educational philosophy” (p. 77). Conti (2004) argues that a teacher-centered style is the dominant approach in North America, one in which learners are assumed to be passive recipients of information. The teacher’s role is to design environments that maximize successful transmission of information that results in observable behavior change. In contrast, a learner-centered approach emphasizes “the interpretations individuals give to their surroundings as they interact with them ... experiences play an

important role in learning” (p. 78). In the field of online learning, Vrasidas (2000) and others have described the underlying epistemological traditions of teacher and learner-centered environments in terms of objectivism, based on behavioristic and cognitive theories, where objective knowledge is transferred to the learner, and constructivism, where multiple perspectives are constructed and negotiated. Vrasidas (2000) advocates positioning these traditions on a continuum, rather than as binary opposites. Zinn (2004) likewise suggests that instructors may often be acting on the basis of multiple philosophical orientations of adult education, whether or not this is intentional or understood explicitly.

Research on Instructors' Philosophical Orientations in Hybrid Learning

There is very little postsecondary research on instructors' philosophical orientations in online and partially online settings. Two such studies are relevant to this review. Stacey and Wiesenbergs (2007) explored similarities and differences between two small groups of Canadian and Australian higher education instructors' teaching approaches and philosophies, comparing two modalities: face-to-face and online. Using a qualitative, open-ended survey in addition to a teaching perspectives inventory developed by Pratt and Collins (2006), the researchers investigated the philosophies and approaches of twenty-two education faculty from both campuses. Overall, philosophies of and approaches to teaching in both online and face-to-face formats were reported by faculty as congruent with constructivist views on teaching. This finding was unexpected, as previous research had revealed a transition to different approaches to teaching in online formats. Data from Australian faculty, however, revealed approaches aligned with

both constructivist beliefs and those aligned with transmission, or objectivist approaches. The researchers speculated that this result reflected the Australian faculty's more recent transition to online teaching.

The overall finding that constructivist philosophies and beliefs were found most consistently in online formats may have roots in an observation by Garrison (2006), that a small but growing number of studies have demonstrated that collaborative student-centered approaches aligned with constructivism to be more effective in online formats. If this is the case, the group of educators in Stacey and Wiesenbergs (2007) study who identified philosophically with constructivist approaches may not have felt the need to shift in fundamental ways (i.e., epistemologically) when transitioning from the classroom to the online format. Notably, though, both groups of faculty in the study expressed a need for more professional development, particularly focused on sustained critical reflection over one's approach to teaching.

Akyol, Ice, Garrison & Mitchell (2010) examined the relationship between online course epistemological orientations to learning and students' perceptions of teaching, social and cognitive presence within the Community of inquiry Framework. The researchers anticipated that the socio-epistemological orientations of instructors might have an impact on students' perceptions of the community of inquiry framework. Course orientations were categorized as primarily constructivist, in which "the role of the teacher is to help learners construct their own meaningful ... representations of the external world" (p. 66), or primarily objectivist, in which the educator "interprets events for the students and students are expected to replicate its content and structure in their thinking"

(p. 66). Additionally, course orientations were categorized along two social dimensions of learning: individual or group, defined as the degree to which “the instructor is the focus of the educational process and the extent to which the instructor relies upon individually or group-oriented activities” (p. 435). The combination of these two poles resulted in four course orientations: objectivist/individual, objectivist/group, constructivist/individual, and constructivist/group. In the objectivist-individual approach, content is transferred from instructor to students, who are asked to read and assimilate preordained knowledge. The objectivist-group approach assumes that students receive subject matter from both instructors and peers. In the constructivist-individual approach, students are assumed to build upon prior experiences and construct knowledge independently of one another (for example, in individual assignments and activities not related to their peers), while in the constructivist-group approach, knowledge construction occurs as a shared activity. These course formats heavily emphasize collaborative reflection and assignments.

Eight undergraduate and eight graduate level courses were coded along these four dimensions, based on an analysis of course activities and discussions. A total of 1,397 students from the sixteen courses completed the community of inquiry survey instrument. Unexpectedly, regardless of course socio-epistemological orientation, students similarly perceived all three elements (teaching, social and cognitive presence) in their courses. However, the youngest age group (18-22) and oldest age group (48-62) perceived teaching and cognitive presence as a similar construct, meaning that “both groups tend to view instructors’ directions and intent as being synonymous with cognitive outcomes” (p.

68). The authors concluded that more attention should be given to “learners who view the learning experience as finite ...develop strategies for self-monitoring and deeper content exploration” (p. 68).

The authors acknowledge the small sample size as the primary weakness of the study. Two additional considerations are relevant to the current study. First, findings from studies of course epistemological orientations in hybrid settings could yield different results from similar studies of online courses. For example, data from hybrid courses in which face-to-face settings enabled students to establish group identity, trust and collaborative learning (Akyol Garrison & Ozden, 2009; Garrison & Vaughan, 2008), showed higher levels of social and cognitive presence connected to perceived learning than similar online formats. The researchers speculated that the combination of both learning environments may have resulted in the development of group identity and perceptions of social and cognitive presence in ways unique to hybrid courses, although the specific nature of the combined face-to-face and online pedagogical variables related to social and cognitive presence is in need of further research.

Second, although the authors hypothesized a relationship between *instructor* socio-epistemological orientation and students’ perceptions of the community of inquiry indicators, the unit of analysis was the course: specifically, course activities and online discussions. Although course activities and discussions are certainly a reflection of instructors’ approaches to teaching and learning, instructors’ epistemological orientations may manifest pedagogically in variety of additional ways not captured in the analysis.

Summary and Research Questions

This chapter reviewed conceptual frameworks for investigating the relationship between social, teaching and cognitive presence and students' perspectives on learning in hybrid courses. Research on students' perspectives has demonstrated consistent perceptions of overall satisfaction with courses, interaction with peers, and increased flexibility provided by the course format. Challenges include motivation for self-direction, perceptions of disassociation from instructors, and developing a sense of community. While research on students' perceptions of hybrid learning has provided some useful information about conditions and practices that students perceive to be most and least effective, they do not provide significant insight into the complex nature of the hybrid learning process. Scholars are increasingly insistent that priority must be placed on comprehensively understanding the nature of learning in hybrid settings, not only to realize the potential for individual and institutional transformation, but to counteract pressures to institutionalize hybrid programming based on the norms of efficiency and fiscal crises (Gumport & Chun, 2005).

Researchers increasingly advocate a more integrated, holistic approach into understanding the interrelationship between students' experiences of learning and multiple dimensions of hybrid course settings (Bluic, Goodyear & Ellis, 2009; Shea et. al, 2012). The integrated components of the community of inquiry model, (Garrison, Anderson & Archer, 2001; Garrison & Vaughan, 2008), Berge's (1995) pedagogical roles framework, and research on instructors' beliefs about teaching and learning in the context of online and hybrid environments formed the conceptual foundation for the current

study. Previous research has primarily examined fully online, rather than hybrid contexts, therefore very little is known about how the integration of face-to-face and online formats impacts students' perceptions of learning connected to social, teaching, and cognitive presence. Although a few studies have investigated social, teaching and cognitive presence in hybrid environments, very little focus has been on how students' perceptions of these constructs and the pedagogical practices connected to them contributes to their learning. Finally, although several conceptual frameworks developed to understand and examine hybrid learning share an underlying set of assumptions regarding the congruence between collaborative, inquiry-based constructivist approaches and hybrid environments (Berges, 1995; Dzuiban, Hartman, & Moskal, 2007; Garrison & Vaughan, 2008; Shea, 2007), scholars are beginning to acknowledge the potential impact of instructor beliefs and epistemological orientations on students' experiences of hybrid learning, noting the lack of research attention in this area.

Research Questions

In light of the lack of research on student learning in hybrid contexts, as well as the lack of understanding of how social, teaching and cognitive presence impacts learning from students' perspectives, the following research question guided the study's primary focus:

R1: In hybrid courses, how is social, teaching, and cognitive presence connected to students' perceptions of learning?

The study was guided by three secondary research questions, based upon gaps identified in the literature. As discussed above, very little is known about what indicators of social, teaching and cognitive presence are connected to students' perceptions of learning in hybrid courses, and research conducted so far has produced inconclusive results across courses. Therefore, the following secondary research question framed the exploration of the associations between presence and learning, from students' perspectives:

R1a: What indicators of social, teaching and cognitive presence emerge from students' perceptions of learning?

Since most of the research on presence relies on students' agreement with predetermined indicators of constructs, the following question guided the exploration into how the indicators identified within students' perspectives either facilitated or impeded learning:

R1b: How does social, teaching and cognitive presence help or impede learning in hybrid courses, from students' perspectives?

The literature on students' experiences in hybrid settings also revealed a need to supplement hybrid course "best practice" discussions with relevant empirical research, including research on students' perspectives of how pedagogical practices are connected to presence and learning (Rourke & Kanuka, 2009; Shea et. al, 2012; Vignare, 2007). The following research question guided the identification of pedagogical practices associated with presence in students' perceptions of learning:

R1c: What pedagogical practices are associated with indicators of social, teaching and cognitive presence in students' perceptions of learning?

The following chapter describes the research methods chosen to examine these questions: a qualitative study in which student focus group assessment data were analyzed for indicators of presence and pedagogical practices connected to students' perceptions of learning.

Chapter Three

Methodology

Introduction

Although hybrid initiatives and courses are proliferating in higher education, there has been very little investigation into the nature of learning in hybrid settings. The significance of this omission for postsecondary education is that it is difficult to draw conclusions about learning in hybrid environments from grade comparisons and outcomes measures alone, and relying solely on these measures does not counterbalance the tendency toward framing hybrid learning in terms of market forces, efficiencies, and reduced need for infrastructure (Betts, Hartmann, & Oxholm, 2010; Vignare, 2007), rather than settings that promote inclusive learning practices (Garrison & Vaughan, 2008). In response to this gap, researchers are calling for increased attention to the potential of hybrids to promote communities of inquiry and deep learning (Garrison & Vaughan, 2008; Shea, 2007; Starenko, Vignare & Humbert, 2007; Swan & Ice, 2010; Zeigler, Paulus & Woodside, 2006), and effective pedagogical practices (Kaleta, Skibba & Joosten, 2007; Zeigler, Paulus & Woodside, 2006). This purpose of this exploratory study was to examine undergraduates' perceptions of how social, teaching and cognitive presence is associated with perceptions of learning in hybrid courses at a large, urban university. Following from review of related literature and the purpose of this study, the following research questions guided the study:

R1: In hybrid courses, how is social, teaching, and cognitive presence connected to students' perceptions of learning?

R1a: What indicators of social, teaching and cognitive presence emerge from students' perceptions of learning?

R1b: How does social, teaching and cognitive presence help or impede learning in hybrid courses, from students' perspectives?

R1c: What pedagogical practices are associated with indicators of social, teaching and cognitive presence in students' perceptions of learning?

As discussed in the previous chapter, most investigation of hybrid learning has focused on levels of agreement or disagreement that "learning" is occurring, rather than probing into the nature of learning. Additionally, little research on hybrid courses has explored the potential connections between students' perspectives on learning and their observations about instructors' course design and pedagogical practices. Therefore, a research method that is rooted in a natural setting, focused on participants' experiences and perspectives in that setting, and that is conducted with the goal of describing and understanding phenomena about which little is known can (a) provide insight into conflicting findings in the relevant literature, (b) identify avenues for further research into *learning* in hybrid settings, and (c) provide a foundation for further inquiry into the complex relationship between instructors' pedagogical practices in hybrid courses, and students' experiences of learning in those courses.

The remainder of this chapter will discuss the paradigmatic framework for the qualitative approach used in this study, followed by research planning considerations, research design, research site and population, data collection, and the analysis procedures used to answer the research questions guiding the study.

Theoretical and Paradigmatic Framework for Research Design:

Interpretivist Approaches to Qualitative Inquiry

There are a variety of approaches that can be labeled “interpretivist.” The approach taken in this study draws from the paradigmatic worldview of social constructivism, in which the goal of research is to focus on participants’ views and interpretations, or participants’ construction of meaning of a situation (Creswell, 2007). The methodology for this study was grounded in naturalistic assumptions regarding the nature of inquiry (Lincoln & Guba, 1985), in which the researcher gathers data by participating in the social worlds and specific contexts in which people are experiencing the phenomenon under investigation. Table 1 summarizes the assumptions that underlie the interpretivist approach outlined on the following pages:

Table 1

Interpretivist Approaches to Hybrid Learning Inquiry

Assumption	Implication for the study of hybrid learning
I. Each situation contains multiple and conflicting interpretations	Exploration of multiple perspectives that create observable phenomenon such as instructors' social and pedagogical behaviors
II. Researcher cannot be free of interpretations; these interpretations connect the researcher to that which is observed	Researcher and research participants collaboratively create interpretations of phenomena while researcher systematically employs methods to maintain the integrity of research participants' perspectives
III. Historically situated interpretive practices constitute a valuable dimension of information	Understanding and explication of taken-for-granted, local interpretations of events related to hybrid learning experience
IV. Inquiry is value-bound	Researcher is an ideal "instrument" for collecting data; flexible and responsive to emotionality and structures that permeate situations under investigation
V. Determinacy and prediction between variables unlikely	Goal is exploration and understanding (verstehen) of the hybrid learning and teaching experience; some understanding of relationships between variables can be achieved

First, the interpretive perspective taken in this study assumed that “(e)very human situation is novel, emergent, and filled with multiple, often conflicting, meanings and interpretations ... It is assumed that the languages of ordinary people can be used to explicate their experiences” (Denzin, 1989, p. 25). In this study, students’ perspectives on their learning in hybrid settings was a focal point for understanding not only their experiences, but also how their interpretations of those experiences provided a means to understand how learning in hybrid settings was connected to presence, and to instructors’ social and pedagogical practices.

Second, interpretivist researchers “participate in the social world so as to understand and express more effectively its emergent properties and features” (Denzin,

1989, p. 25). Rather than assuming a separate stance from the object of inquiry, the researcher is placed directly into the context of the phenomena of interest in order to understand it. For example, the researcher in this study participated in the facilitation of student focus groups within the students' classroom settings, continuously checking her interpretations of students' responses. The assumption from an interpretivist perspective is that it is impossible to bracket subjectivity or to be free of interpretations. The implied hermeneutic circle "places the researcher and subject at the center of the research process ... The subject who tells a self- or personal experience story is, of course, at the center of the life that is told about. The researcher who reads and interprets a self-story is at the center of his or her interpretation of that story. Two interpretive structures thus interface one another" (Denzin, 1989, pp. 53-54). In other words, the researcher systematically constructs his or her own reading of the processes by which events are perceived as meaningful, continually participating in and building upon the production of meaning while maintaining the integrity of participants' experiences. The resulting researcher stance results in several methodological opportunities, including the ability to explore atypical responses, to perceive information at multiple levels simultaneously, to interact flexibly with situations, and to be responsive to environmental cues (Lincoln and Guba, 1985).

Third, findings resulting from interpretivist inquiry are not intended to be generalized across age-groups, study designs, locations and other situational constraints, nor is the goal to avoid findings which are most often termed "mixed" or "inconclusive." Instead, as Lincoln (1996) argues, "all truths are partial and historically situated ...just

because we cannot find the whole truth finally and forever does not mean we cannot know anything” (p. 6). The interplay between local circumstances and interpretive practices can provide a rich dimension of information regarding the concept under investigation. “Experience constituted in a particular organization or setting may take on the general qualities that the organization or setting promotes, but the interpretation is also practical, artfully maneuvering what is locally available” (Holstein & Gubrium, 1994, p. 268).

Fourth, this study is constructed acknowledging the value-bound nature of inquiry, including the values inherent in the framing of the problem, the guiding paradigm, and the theoretical framework guiding the collection of data. Within an interpretivist approach, “knowledge reflects interpretive structures, emotionality, and the power relations that permeate the situations being investigated. As a consequence, interpretive studies can only reveal the interpreted worlds of interacting individuals” (Denzin, 1989, p. 30).

Fifth, this study did not have as its goal the explication of causal relationships between students' perspectives and instructors' approaches to teaching hybrid courses. Lincoln and Guba (1985) respond to the question of determinacy with the naturalistic axiom which assumes that “(t)here are multiple constructed realities that can be studied only holistically; inquiry into these multiple realities will inevitably diverge (each inquiry raises more questions than it answers) so that prediction and control are unlikely outcomes although some level of understanding (*verstehen*) can be achieved” (p. 37). The interpretive process entails the rigorous, systematic attempt to make these

interpretations available to others for the purpose of understanding, as better understandings can result in relevant, applied programs for addressing relevant social, political and educational issues (O'Donoghue, 2007).

Because the researcher conducted secondary analysis of data gathered earlier in an ongoing professional setting, research methods included detailed planning at the outset of analysis to account for the researcher's role, issues of reliability and validity, and ethical considerations. The following sections highlight the outcomes of research planning that impacted the secondary analysis research design.

Research Planning

Researcher's Role

According to Creswell (2007), qualitative researchers recognize that their own backgrounds shape their interpretations of research findings, and they position themselves in the research to acknowledge how their interpretations flow from their personal, cultural, and historical experiences. Researchers thus make an interpretation of what they find, an interpretation shaped by their own experiences and background. The researcher's intent is to make sense (or interpret) the meanings others have about the world (p. 21).

Due to the researcher's central role as "instrument" in interpreting qualitative data (Lincoln & Guba, 1985), research methodology and protocol needed to include specific measures for mitigating the potential threat of researcher bias. Prior to data analysis, the researcher created a detailed memo explicating the observations and related assumptions

(Maxwell, 2005) stemming from hybrid course assessment work, the goal of which was to “examine ... goals, experiences, assumptions, feelings and values as they relate to ... research, and to discover what resources and potential concerns [the researcher’s] identity and experience may create” (p. 27). Additional memos were also created after each initial course analysis, to provide record of interpretations that converged and diverged with assumptions and experiences stemming from the initial assessment process.

Review of assumptions.

The researcher applied the review of original course and summaries from all courses to explicate assumptions based on the researcher's role at the University and in the assessment process, and based on conclusions from the review of relevant literature. As McCracken (1988) suggests, the purpose of this strategy in qualitative research is to set up a framework of expectations to be “defied” by subsequent data; in other words, to conduct an inventory of assumptions and perceptions that can be critically analyzed during subsequent data analysis to address concerns of validity, when researchers are closely connected to the research setting.

The results of this initial process are summarized in the following table:

Table 2

Initial Assumptions About Students' Learning in Hybrid Courses

Assumption	Context
Mixed reactions to hybrids	Expressions of satisfaction and dissatisfaction connected to a variety of factors that vary widely across courses "Helping" pattern: sharing perspectives, and use of class time. "What could be changed" pattern: more sharing perspectives (!), use of class time (!) and work that is perceived as "redundant." Some students are unhappy with technology. Students love it when professors are online; many wish for more presence there.
Class time is important to students	Class time is mentioned almost more than any other subject in relation to learning
Students appreciate flexibility	Students appreciate having more time outside of class - this seems incongruent with the importance of class time to students (they want more class time)
Relationship to faculty	Diverse responses across courses are difficult to categorize. Students want "more professor" - even in courses where professors report being online constantly.
Affective reactions to hybrids	Some resentment of hybrids "taking away the professor" Assessment data does not reflect the entirety of students' emotional responses during actual interaction. This was especially apparent during conversations about missing professor expertise, and "why is this a hybrid?"
Importance of discussions	Students highly value talking to peers, with several exceptions that do not have a strong discernable pattern
Faculty role	Some people seem more comfortable with facilitating peer interaction and work, while others seem to be adjusting to that role. Use of class time <i>appears</i> to favor lecture - are students interacting with one another as much as their responses seem to suggest?

This table summarizes the researcher's "assumptions memo" recounting initial overall impressions from recollections of student conversations, and a global scan of data across courses. This process was helpful for checking emergent categories later in the analysis. For example, the initial theme, "Centrality of Peer Interaction" emerged so early and clearly in the process, that the researcher felt compelled to return to the memo repeatedly to ensure that the initial impressions were not unduly influencing what was emerging from the data. This comparison revealed similarities, but also significant differences between the researcher's early assumptions and what emerged from the data related to peer interaction. The process also documented early, puzzling questions, for example, why did students want "more professor" even when professors often reported to the researcher that they perceived themselves as fully available online? Although the analysis did not answer every initial question the data prompted, the process prompted a more reflective awareness of important questions that had *not* been asked, as the analysis proceeded.

Reliability and Validity

The above section illustrates that while the process of recognizing salient concepts was enhanced by the researcher's role within the University's transition to hybrid course offerings (Jorgensen, 1989), it could also result in a failure to grasp subtle nuances of meaning. Kirk and Miller (1988) observe that in the case of qualitative observations, "the issue of validity is not a matter of methodological hair-splitting about the fifth decimal point, but a question of whether the researchers sees what he or she thinks she sees" (p. 21). Likewise, in qualitative research, reliability, or the degree to

which measurements are consistent, is less concerned with findings that are replicated in a separate identical research study, but instead “depends essentially on explicitly described observational procedures” (p. 41). Data coding procedures for arriving at valid interpretations of students' perceptions of presence and learning were planned carefully in advance and are described in this chapter.

Synchronic and diachronic reliability (Kirk and Miller, 1986) are of primary concern when viewing an institution during a time of rapid change. Synchronic reliability pertains to the degree of similarity of observations made within the same time period, while diachronic reliability pertains to the degree of stability of observations across historical and temporal contexts. Given the phenomena of interest in this study, the concern for reliability had to be balanced against the erroneous assumption “that configurations of data would be isomorphic across substantial intervals of time” (Kirk & Miller, p. 42). The researcher planned two forms of comparative analysis to be used throughout the study. First, comparison of the researcher's original course assessment observation notes with the course memos (Maxwell, 2005) created during data analysis for each course was systematically conducted during each separate course analysis. Second, constant comparison analysis (Onwuegbuzie, Dickenson, Leech, & Zoran, 2009) was planned to allow for comparison between categories unique to individual courses with those that emerged as constant over several courses and quarters, as this did not deny historical change, but allowed for testing of interpretations across course contexts and time periods (Glaser & Strauss, 1967; Kirk & Miller, 1986).

Lincoln and Guba (1985) describe a system of “checks and balances” for reliability and validity within the naturalistic research paradigm. In this chapter, sections on research design and implementation will include discussion of the following strategies: member checks (validating emergent categories with respondents), triangulation (continual cross-course and literature comparison), prolonged engagement and persistent observation, and the use of reflexive journals within the data collection and analysis. However, because the data analyzed was previously collected and extant at the time of planning for research, there are some strategies for reliability and validity that could not be incorporated. These and other study limitations will be addressed at the conclusion of this study.

Ethical Considerations

Because this project originated within the researcher’s ongoing work with hybrid learning assessment, the ethical dimensions of this study are similar to those that must be accounted for by researchers who are themselves participants in naturalistic research settings (Lincoln & Guba, 1985; Lofland, Anderson, Snow & Lofland, 2005). In this study, data gathered for the purpose for understanding hybrid learning was used in a secondary analysis to understand presence in students' perspectives on learning. This was similar, but not identical to, the original purpose of data gathered throughout the University's hybrid workshop series. A related ethical concern is informed consent from study participants, given the original purposes of data collection as compared to the nature of the current study. Speaking of research in naturalistic settings, Punch (1986) argues that “[i]n terms of research, one can think of deception in relation to the research

purpose, the researcher's identity, the use of disguise, the nature of the methods, and in terms of broken promises to the researched" (p. 39). Each of these will be discussed below.

Research purpose.

At the time of data collection, faculty and students were informed of the purposes of assessment; that is, to learn about factors that contribute to students' success and learning in hybrid courses. Faculty were also informed that all course data would be kept strictly confidential, and that data would only be reported in the aggregate. Since only a subset of hybrid course data was used in this study, and because no faculty or course information was directly reported, the confidentiality of participants' identities was assured. However, all faculty whose courses were isolated for the data set were contacted in December 2011 for their consent to use the course data for the current study purpose (see Appendix A, Invitation to Participate). All faculty agreed to the use of course data for the present study.

Researcher's identity.

Throughout data collection, the researcher was known to all participants (faculty and students) in relation to her assessment role. Although the notes taken during student assessment sessions were not originally done for purposes of the current study, no quotes from these materials are included in the research report. Instead, these notes function much the same as field notes (Kirk & Miller, 1986) used to augment and support the reliability and validity of qualitative data.

Nature of the research.

The nature of the research throughout the hybrid workshop series has not changed substantially from the purposes of the current study: To understand students' perceptions of learning in first-term hybrid courses. The research purposes have been refined to include the role of presence in perceptions of learning, and to gain more insight into pedagogical practices that are associated with presence in hybrid courses.

Broken promises to the researched.

Faculty workshop participants were promised by the researcher orally and in writing that (a) all course data would be kept confidential, and (b) data would be reported publicly, but only in the aggregate. The provisions in the original agreement are identical to those provided to faculty when invited to participate in the current study.

A final ethical concern is that of the researcher's role and relationship with participants in the hybrid series assessment efforts. Several qualitative researchers (Kirk & Miller, 1986; Punch, 1986; Creswell, 2007) emphasize the importance of establishing rapport and trust with study participants, not only for ethical reasons but for reliability and validity of the eventual study results. As will be discussed in further detail below, assessment sessions were planned as collaboratively and possible, and all efforts were made to make all participants, faculty and students, feel comfortable and at ease as "partners" in the investigation of learning in their courses.

A thorough accounting of reliability, validity and ethical considerations in the original assessment process revealed both strengths and limitations that were accounted for as much as possible in the design of the secondary analysis. The following section

describes both the design of the data gathering procedure and process for secondary analysis.

Research Site

Midquarter assessment data analyzed in this study was a sample from data collected in seventy-four hybrid courses at a large public urban university (HU, or Hybrid University) between Fall 2010 quarter and Fall 2011 quarter. The advantages of this setting are as follows. First, the researcher conducted the majority of the assessment sessions, course analyses and follow-up conversations with instructors. Second, all participating instructors had completed the same hybrid course conversation workshop series conducted by the University, and third, H.U. is currently poised to dramatically increase the number of hybrid offerings, making these findings timely and of potential use to those in leadership positions related to hybrid initiatives at the university.

University Setting

H.U. enrolled 29,808 undergraduate and graduate students during the 2010-2011 academic year. 57.5% of students were enrolled full-time. The university offers a total of 226 degree programs; 99 bachelors, 89 masters and 38 doctoral programs. As of Fall 2010, there were a total of 4066 employees; 1562 of those employees categorized as faculty. HU's President's Office has recently has developed goals related to hybrid learning within its formal planning processes, and campus instructional designers have offered a workshop series on hybrid course conversion since the Winter 2010 quarter. At present, approximately 500 hybrid courses are offered at HU, approximately ten times the

hybrid offerings in 2005, and the numbers continue to grow (University Scheduling). In July 2011, a centralized office of online learning was created to coordinate and oversee online and partially online course offerings at the University.

Study Population

The population for this study was a convenience sample, as it was comprised of student data from the courses taught by faculty who took part in the University's hybrid workshop series. Although convenience sampling has been criticized as problematic for many reasons, including questions as to whether the sample is a valid representation of the larger population under study (Creswell, 2005), it can also provide timely and feasible access at key points in educational initiatives, and provide a way to "learn about a group that is difficult to gain access to, or a category of people who are relatively rare in the population" (Maxwell, 2005, p. 89). The data in this study captures the experiences of students and faculty during the earliest stages of institutional transition to hybrid learning.

Hybrid Workshop Series

Beginning Winter 2010 quarter through Summer 2011 quarter, instructional design staff in HU's instructional development center offered a workshop series on hybrid course conversion. The goal of the series was to prepare faculty who wished to convert a current face-to-face course to a partially online, partially face-to-face format. The series consisted of five, two hour workshops, each session focusing on one or more topics relevant to planning and teaching hybrid courses. Approximately sixteen faculty participated each quarter (102 total participants). Because each instructor received a mini-grant stipend for participating in the workshop series, requests for proposals were

sent to the campus at regular intervals, and faculty submitting proposals were informed that one of the activities comprising the process was a Small Group Instructional Diagnosis (Diamond, 1998), a midquarter assessment session facilitated by the researcher. Participants were also informed verbally and in writing that although assessment data would be confidential, available only to the researcher and instructor, cross-course data would also be analyzed with the goal of learning what was most effective in hybrid courses at HU. Instructors were reminded of this information again in writing at the time of scheduling the feedback session.

Participation Criteria

Of the seventy-four courses from which assessment data was collected, thirty-nine courses were selected for analysis in this study. Those that were selected met the following criteria:

Faculty who participated in HU's hybrid conversion workshop series.

Courses chosen for the study were all taught by faculty who received the same preparation for teaching hybrid courses. This was done to minimize the possibility that variations in students' responses were due to different levels of preparation for hybrid teaching (preparation vs. no preparation, etc).

Face-to-face feedback sessions.

Because hybrid courses have reduced classroom time, some faculty requested that the students respond to the feedback questions using an anonymous survey tool online. These responses were sent directly to the facilitator. This data was eliminated since the data was not gathered using an in-class group process (see data collection).

Courses in which the researcher was the midquarter assessment facilitator.

Although the researcher was the primary facilitator for the hybrid course conversion assessments, a few sessions were conducted by other center staff due to schedule conflicts. Courses were eliminated if data was collected by someone other than the researcher.

Undergraduate, sophomore through senior level courses.

It is possible that the relatively few graduate courses in the original sample could yield different results due to nature of work at this level; therefore, these courses were eliminated. First year, or freshman-level courses were also be eliminated to increase the likelihood that all, or most students in the final study sample would have had prior experience with course technologies, particularly a course management system.

Courses using the current course management system.

During the 2010-2011 academic year, HU transitioned to a new course management system. Faculty in the hybrid course workshop series were all using the new course management system beginning Fall 2010 quarter. Therefore, only course data from Fall 2010 quarter onward were included, to avoid differential responses related to the use of the previous system.

Faculty who had previously used a course management system.

A few faculty in the original sample had never used a course management system prior to converting their course to hybrid format. Faculty who are entirely new to online technologies is an important area of inquiry within online and partially online learning; however, since the number of faculty new to online technologies was so small in this

case, these courses were eliminated. Preliminary research on hybrid faculty roles reveals pedagogical issues that are unique to faculty who are completely new to technology (Kaleta, Skibba, & Joosten, 2007).

Once the courses were chosen for the sample, the researcher received an approval from the University's human subjects review to send a notification to potential participants of the intention to conduct secondary analysis (see Appendix A: Invitation to Participate). All faculty who were notified agreed to allow the researcher to use the course data for cross-course analysis for the purpose of the present study. The final sample of thirty-nine hybrid courses represents 1, 886 sophomore, junior and senior level students. Table 3 lists course level and college for each of the thirty-eight courses:

Table 3

Hybrid Courses by College and Level

College	Number of Courses	Course Level
College of Liberal Arts and Sciences	25	Sophomore: 8 Junior: 12 Senior: 5
College of Urban and Public Affairs	3	Junior: 2 Senior: 1
College of Engineering and Computer Science	1	Junior: 1
University Studies	5	Sophomore: 1 Senior: 4
School of Business Administration	4	Sophomore: 1 Junior: 3
School of Social Work	1	Senior: 1
Total:	39	

Research Design

To explore students' perceptions of learning connected with social, teaching and cognitive presence in hybrid courses, a qualitative design utilizing thematic analysis of existing student assessment data was conducted. Qualitative methods are particularly appropriate for an exploratory study examining students' perceptions about learning and connections to the constructs of presence, because qualitative methods rooted in naturalistic inquiry allow for exploration of issues about which little is known, encourages an in-depth, contextual understanding of a particular phenomenon, and seeks to understand individuals' experiences of that phenomenon (Creswell, 2005). The primary method used to achieve these research goals was analysis of existing student assessment data, gathered using a modified focus group process (Morgan, 1998; Stewart, Shamdasani & Rook, 2007).

Significance of Focus Group Method

Focus groups are used for a variety of reasons; the following are focus group rationale relevant to the present study.

Focus groups are an effective methodology for understanding how people perceive issues of important to them, in their everyday language and communication frameworks. A primary goal of focus groups as a qualitative research method is "the explicit use of group interaction to produce data and insights that would be less accessible without the interaction found in a group" (Morgan, 1988, p. 12). Focusing group discussions on particular questions or topics can yield information that may not be forthcoming in an individual, one-on-one setting (Creswell, 2005). Focus groups are an

efficient method for obtaining data from large numbers of participants in a social environment, where the interactions among participants can yield rich, additional perspectives on a topic (Onwuegbuzie, Dickinson, Leech & Zoran, 2009). Focus group research can provide insight into topics and phenomena about which more research is needed, providing qualitative data and perspectives from large groups of people (Morgan, 1988). Focus groups can also provide insight into findings from existing literature that are inconclusive or contradictory, potentially identifying additional avenues of inquiry. "When the researcher is relatively new to an area, or puts a priority on not repeating the received wisdom of the field, focus groups have much to offer" (Morgan, 1988, p. 21).

Morgan (1997) suggests that the most straightforward criteria for determining appropriateness of focus group methodology is "to ask how actively and easily the participants would discuss the topic of interest" (p. 17). Regarding the present study, the researcher has conducted focus group assessment practices (similar to the one producing the data for this study) for sixteen years, and has observed very few cases where students were not actively and easily able to discuss their experiences of learning. The process was also appropriate for gathering information about which little is known (students' learning experiences in hybrids), from large numbers of students across numerous course settings and disciplines.

The following focus group methodological criteria (Stewart, Shamdasani & Rook, 2007) also assisted in determining the appropriateness of the focus group methodology used to gather the original data, in relation to the purposes of the present study.

Appropriate focus.

The focus of the research topic should be broad enough to allow for participants' interpretations of experience, but focused enough to generate meaningful data about a topic. One example of a focus group question in this study was, "What is helping you to learn?" followed by the sub-prompt, "Please address both classroom and technology-mediated formats." This question was focused on learning, rather than any number of other possibilities about the course, but did not constrain students within any particular aspect of learning, other than asking them to consider both course formats. (In community-based courses, students were also asked to consider the community-based setting). Thus, students were able to comment on a wide range of experiences connected to learning in hybrid courses.

Appropriate for group interactions.

The environments available for individuals to share their perspectives should be facilitative of open and comfortable communication. Students in this study met in the same classroom environments in which they had been interacting for several weeks. Prior to the assessment process, the researcher always conferred with course faculty regarding their perceptions of how the interpersonal environment was progressing. In cases where ongoing conflict situations were normative in a class environment, focus group procedure was either highly modified in structure, not used until the conflict situation was resolved, or postponed indefinitely. The researcher additionally prepared students for interacting comfortably, which will be discussed in subsequent sections.

The process elicits in-depth data.

In this study, only three-four questions were used, and as much as was possible, the researcher requested ample time (thirty minutes to an hour) for students' responses. This allowed student groups to speak until finished on given topics, and also allowed the researcher to visit groups in process, clarify questions, monitor discussions, assess discussion processes (for example, equitable participation practices), ask students to elaborate on answers, and take notes on discussion content and affective communication (for example, perceived excitement, frustration, etc.). The resulting data provided a great deal of depth into learning experiences, particularly for data which was notes-based (Onwuegbuzie, Dickens, Leech & Zoran, 2009).

A humanistic research setting.

A humanistic research setting is one that encourages a "general orientation that includes empathy, openness, active listening, and various types of interactions with research participants" (Stewart, Shamdasani & Rook, 2007, p. 12). The researcher made every effort to frame the assessment sessions such that students were clear about the purpose of the session, the importance of listening to one another during the process (particularly when their experiences of learning diverged), and how their responses would be summarized and responded to by their instructors. As will be explained further below, student "moderators" were given explicit facilitation guidelines at the beginning of the process. The researcher actively monitored groups to watch for equitable and comfortable participation.

Small Group Instructional Diagnosis

Small group instructional diagnosis (SGID) is a whole-class interviewing focus group technique that has been widely used as a formative assessment strategy in higher education for almost three decades (Angelo & Cross, 1993; Black, 1998; McGowan & Osguthorpe, 2010). It uses an open-ended feedback process in which groups of students in a course are asked to identify aspects of course design and facilitation that are most important to their learning. The focus group data analyzed in this study was originally collected for the purpose of understanding what was helping and hindering students' learning in hybrid course settings. The procedure for collecting the data is explained in the next section.

Midquarter Assessment Data

Data was collected following the procedures for Small Group Instructional Diagnosis (SGID). There are six steps in the process, and these were followed as closely as possible for all courses in the study.

1. Prior to visiting each course, the researcher contacted each instructor about the process and made any appropriate modifications requested, including additions to the default SGID format and questions requested by instructors. The default questions for the hybrid course assessments were as follows:

- What about this course is helping you to learn? (Please comment on both the face-to-face and technology-mediated aspects of the course.)
- What about the course could be changed to improve learning? (Please comment on both the face-to-face and technology-mediated aspects of the course.)

- What specific suggestions do you have to bring about the changes you proposed?

After two quarters of collecting assessment data, the researcher also added a five-item Likert scale to assess students' overall satisfaction with their courses. The scale was constructed as follows: (a) Not at all satisfied, (b) Slightly satisfied, (c) Somewhat satisfied, (d) Very satisfied, (e) Extremely satisfied.

Since the range of student reactions was diverse across course settings, the researcher hoped to gain some insight into overall satisfaction, in addition to range of experiences provided by the assessments. Satisfaction data was available for twenty-eight courses in the current study data set.

2. The researcher conducted the feedback session with students, normally around the middle (fourth or fifth week) of the university quarter. Students were randomly assigned to groups of five to six members, and each group chose a recorder. Recorders were each given a sheet on which to record the group's responses to the questions outlined above, and questions as decided upon by researcher and instructor. Recorders were also given facilitation instructions, verbally and in writing. These instructions were intended to help facilitators avoid common pitfalls of small group interaction, such as allowing some participants to dominate, or writing responses that don't reflect the intentions of group members. On the front of the sheet, recorders were also instructed to write responses that reflect group consensus so that feedback would be representative of the group, rather than one or two members. Individual comments not representing consensus were also encouraged, but added on the back side of the sheet, either by the recorder or other group members. Individuals were also free to write confidential

statements given to the facilitator, or email feedback to the facilitator after the assessment session. (See Appendix B: SGID Response Sheet).

The researcher followed established protocol for facilitating SGID sessions. Throughout the group discussions, the researcher circulated among groups to answer questions and take any notes that might be relevant (for example, the emotional tone of group discussions). The researcher also monitored group discussions, asking probing questions when appropriate. At the end of group discussions, the researcher visited each group and reviewed each recorder's summary, paraphrasing to the group what she understood the group to be saying about the course. She also clarified any comment that was confusing or not understood. Conducting this process with each group not only confirmed that the facilitator understood the students' comments from their perspectives, but also clarified perspectives and experiences underlying the responses that may otherwise have been hidden to her. Whenever possible, the researcher immediately noted any additional clarifications or comments from the students during her visit to the group.

It is important to note that during the hybrid course discussions, students were asked to expand on comments about course design and pedagogical practices with "why?" (i.e., why is this statement, idea, or suggestion important to learning), if they had not already done so. The researcher hoped that this would provide more information for instructors regarding effective course design and pedagogy.

3. Responses from all groups were thematically summarized from each course to capture emergent themes from all or most groups in the course. Representative group

comments were included with each summary statement. Instructors were also welcome to review raw data if they wished.

4. Whenever possible, the researcher and instructor spoke about the SGID session and review the feedback together. The researcher's role during this discussion was to listen carefully and ensure that both researcher's and instructor's interpretations of the data were grounded in students' perceptions. Ideally, instructor and researcher create a dialogue in which both perspectives can create deeper understanding of students' and instructor's experiences in the course.

5. The researcher was also willing, when requested, to discuss instructors' plans for responding to the students. An important part of the SGID process is communicating to students what was learned (Angelo & Cross, 1993; McGowan & Osguthorpe, 2010). Most faculty in the hybrid conversion series had not previously participated in a formal midquarter assessment process before, so follow up conversations included instructors' plans for implementing changes in courses, as well as communicating with students about the assessment results. Although multiple dramatic changes in a course are not feasible during the time that a course is in session (Diamond, 1988), small but effective adjustments can usually be made.

6. The researcher followed up with instructors about the effect of proposed adjustments. This normally consisted of a brief email or phone message that was intended to find out how the course was progressing and whether the instructor had any additional comments or questions. Each set of data from the SGID assessment was then combined with course syllabi, materials, and notes from follow-up meetings with the

instructors. These materials were stored in a private file that can only be accessed by the researcher.

The following section will describe the appropriateness of this secondary data set for answering the current study's research questions; specifically, how a previously collected data set can answer the current research question constructs.

Appropriateness of the Existing Data Set

The data set consists of midquarter assessment data from a sample of thirty-eight undergraduate hybrid courses at a large urban university, containing responses from almost 1,900 students. The midquarter assessment data analyzed for this study was originally collected as part of a hybrid workshop series for faculty transitioning face-to-face courses to hybrid formats, and asked students to describe what was helping, as well as impeding their learning in hybrid courses. Although such midquarter assessment data has typically been found to reveal perceptions of instructor pedagogical approaches, in addition to other aspects of the course experience (Diamond, 1988; McGowan & Osguthorpe, 2010), there was no guarantee in this case that data necessarily contained specific indicators of teaching, social and cognitive presence. Therefore, the researcher followed two procedures to assess the appropriateness of this data set for examining the relationship.

First, a literature review was conducted to evaluate studies in which the purpose was validation of the community of inquiry survey (Garrison, Anderson & Archer, 2010), particularly the survey items operationalizing the concepts of social, teaching and

cognitive presence. As described in chapter two, the literature search for validation studies of this instrument revealed large scale studies demonstrating agreement from undergraduate and graduate students that the survey items for social, teaching and cognitive presence were significant to their online and hybrid experiences, although questions remained as to why individual survey items were perceived as more important than others (e.g., Garrison, Cleveland-Innes & Fung, 2010). Based on these results, the researcher reasoned that student focus groups would themselves identify similar indicators of social, teaching and cognitive presence in relation to perceived learning.

The second procedure for assessing the appropriateness of this data set was a small pilot analysis of six hybrid course data sets during the Summer 2011 quarter. Focus group data from six courses with a total of 226 students revealed indicators of the three presences in statements responding to questions about what was helping and hindering learning. This pilot analysis was purely descriptive, with the goal of coding focus group statements for each question corresponding to a grid outlining indicators of social, teaching and cognitive presence (see Appendix C, Presence Coding Matrix). The coding analysis revealed many statements corresponding to indicators of social, teaching and cognitive presence, as illustrated in the following table:

Table 4

Pilot Study: Indicators of Social, Teaching and Cognitive Presence

Presence Category/ Specific Indicator	Number of statements corresponding to category	Example from data
Social Presence/ Sense of belonging to a course community	108	We don't feel like we know the other people in class very well outside our group - only see everybody once every two weeks.
Teaching Presence/ Facilitation of focus on task and relevant issues	66	She helps us connect what we did online to what happens in class and vice versa so it's like a cycle that helps us keep building on what we know.
Cognitive Presence/ Environment enables sustained reflection and critical discourse	28	In class where we can connect all of the [online] concepts before moving on [is helpful to learning]

The number of statements corresponding to social and teaching presence indicated that this data set was appropriate for exploring the relationship between students' perceptions of these constructs and perceptions of learning. At the time of the pilot study, the researcher speculated that the greater number of responses indicating social presence was possibly due to the nature of this construct: Students' comments reflected their own, as well instructors' social presence, whereas in students' minds, indicators of teaching presence may have reflected primarily upon the instructors. The fewer number of responses coded as indicating cognitive presence were presumed to be due to the questions asked in the midquarter assessment instrument (e.g., what is helping you to learn?). The researcher wondered whether students directly equated indicators of

cognitive presence with "learning." If so, students may not have emphasized cognitive presence indicators, but instead may have emphasized the course and pedagogical features that assisted them to achieve cognitive presence, or "learning." Exceptions to this possibility occurred when indicators of cognitive presence overlapped with an indicator of teaching presence, as in the following example: "[Online] Discussion questions provided by professor are the most helpful to guide us in exploring what we read." Further investigation uncovered research demonstrating similar findings of low cognitive presence levels (Rourke & Kanuka, 2009), implying that the lack of indicators may not be unique to the present data set. The findings from this study revealed additional patterns connected to social, teaching and cognitive presence, the implications of which are considered in the findings and discussion chapters.

Data Analysis

Once the data from the thirty-eight courses for this study were isolated, analysis proceeded in the following stages.

Review of Original Small Group Diagnosis (SGID) Data

A review of original SGID data and comparison of this data to the resulting summary analyses for each course was conducted. The original purpose of the SGID analysis was to provide a descriptive summary of results that would be accessible to instructors. The purpose of the review of this data was twofold. The first goal was a fresh review of the summary for each course in comparison with the original group assessment data, and the second goal was to note what information was excluded in the

summary and why. To gauge the validity of subsequent interpretations of participants' responses, the researcher attempted to "manufacture distance" (McCracken, 1988), not only by analyzing assumptions in the literature, but also by explicating researcher responses and assumptions when initially reviewing the data.

Analysis of Course Data Guided By Research Questions

The primary research question framing this study explored the relationship between social, teaching and cognitive presence and student perceptions of learning. To better understand the nature of the relationships between the primary concepts evaluated in this study, the following secondary research questions were investigated:

R1a: What indicators of social, teaching and cognitive presence emerge from students' perceptions of learning?

R1b: How does social, teaching and cognitive presence help or impede learning in hybrid courses, from students' perspectives?

R1c: What pedagogical practices are associated with indicators of social, teaching and cognitive presence in students' perceptions of learning?

Morgan (1988, 1997) outlines two approaches for analyzing focus group data: ethnographic summary using thematic analysis or systematic coding via content analysis. The analysis for this study used both approaches. Research question 1a was analyzed using qualitative content analysis of assessment data (Elo & Kyngas, 2007; Morgan, 1988). Research questions 1b and 1c were analyzed using qualitative content and thematic analysis of presence statements previously coded during analysis for research question 1a. The following diagram illustrates the research process.

Presence "indicators" are defined in this study as phrases or statements coded to presence categories and subcategories. These indicators were organized into three databases for social, teaching and cognitive presence. These databases formed the foundation for thematic analysis of presence in connection to students' perspectives on learning. Finally, these databases were also used to identify pedagogical actions and behaviors associated with each presence, from which pedagogical themes across courses were developed.

Coding practices can be characterized as primarily deductive or inductive (Elo & Kyngas, 2007). Both procedures were used, depending on their appropriateness to the research question under analysis. The following diagram illustrates the primary differences between the two approaches used in this study:

A deductive approach is used when the goal of content analysis is to explore preexisting conceptual categories in a new context (Elo & Kyngas, 2007). The process of analysis for research question 1a, (In hybrid courses, what indicators of social, teaching and cognitive presence are associated with perceived learning?) was appropriately deductive in nature, since indicators of presence were being analyzed in contexts about

which relatively little is known: students' perspectives on learning in hybrid settings. The process for question 1b was inductive, as coding was the first in several stages of developing emergent themes from students' perspectives. The process for question 1c was once again deductive, as pedagogical actions and behaviors were identified within indicators of each presence and coded in comparison to a predetermined matrix of pedagogical roles. Pedagogical practices associated with each role were then analyzed thematically connected to social, teaching and cognitive presence.

Research Question 1a: Indicators of Presence

Presence Analysis Matrix

To code for indicators of social, teaching and cognitive presence, a coding matrix containing categories and subcategories for each presence was created, adapted from Garrison and Vaughan (2008), and Diaz, Swan, Ice and Kupczynski (2010). The matrix is located in Appendix C.

Selecting the unit of analysis.

The unit of analysis for coding indicators of presence was individual statements in the raw assessment data. This necessitated two judgments: whether individual statements or groups of statements were the more appropriate unit of analysis, and whether the statement coded accurately represented its corresponding presence indicator (Elo & Kyngas, 2007). The researcher decided to use individual statements as the unit of analysis for the following reasons. First, the nature of the small group instructional diagnosis process primarily resulted in individual statements that often "summed up" a group's thinking about an issue. For pragmatic reasons, individual statements were more

appropriate. However, the researcher also consulted literature on the methodological history of the community of inquiry questionnaire, particularly coding validity (Garrison, 2007; Garrison, Anderson & Archer, 2001; Garrison & Arbaugh, 2007; Shea et al, 2010). The development of the CoI questionnaire involved textual analysis of online discussions. The researchers discovered that both sentence and larger paragraph units were coded to the same presence indicators with equivalent accuracy across multiple coders (e.g., Rourke, Anderson, Garrison & Archer, 2001). Thus individual statements were considered an appropriate unit of analysis for this study, although judgments were occasionally aided by surrounding statements, as well as the researcher's additional notes made while confirming responses with the focus groups.

The second issue of coding validity pertained to whether the coded statement accurately represented its assigned presence indicator. The coding matrix contained presence categories and sub-categories. Figure 5 provides an example of statements coded with social presence:

Figure 5 illustrates two example statements in response to the questions, (a) what is helping you to learn, and (b) what could be changed to improve learning. Both statements were coded under "Expressing Emotions and Camaraderie," an indicator of "Affective/Interpersonal," one of three categories of social presence. At times the process of determining presence category was relatively straightforward, as with the example statements in Figure 5. The language used in both of these statements is directly connected to the social presence categories and subcategories in the coding matrix. However, other statements required somewhat more interpretation. For example, the researcher needed to decide whether statements such as "Interaction with peers in class and online is helping us to learn," were appropriately coded as social presence/open communication/comfortable interacting with other course participants. Although the connection may seem obvious, the students' perspectives in this case do not include language indicating that interaction is comfortable. In these cases, judgments were made based on the following guidelines adapted from Elo & Kyngas (2007).

First, the researcher consulted the surrounding presence statements within and between groups. Second, the researcher consulted her own facilitation notes collected during the assessment, and reviewed the statement in the context of the raw data. Third, the researcher referred to relevant literature. Finally, the researcher drew from relevant literature on adult learning. Therefore, a judgment could be made that the above statement was consistent with the sub-category, "comfortable interacting with other course participants" if comfort levels were indicated in surrounding statements within and

across classroom groups, comfort levels were reflected in the researcher's assessment facilitation notes, if peer interaction had been shown to impact students' learning positively when comfort levels were also perceived positively (e.g., So & Brush, 2008), and relevant literature on adult learning supported the contention that peer interaction perceived as helpful to learning necessitated some level of comfort in the interaction setting (Brookfield, 2006).

Since the three presences in the CoI framework can overlap, occasional statements that reflected indicators of more than one presence were coded for the presence indicator that was the primary subject of the statement. For example, "Our instructor provided activities that put us at ease, so we can converse comfortably here and online" was categorized as a teaching presence statement, since the students are primarily making the point that a particular strategy for facilitating discourse resulted in an environment conducive to learning. The statement was thus counted once in the data as "teaching presence," to assist in manageable analysis of the data. However, when coding focus group data, Stewart, Shamdasani and Rook (2007) caution that "[j]udgement is required to interpret whether the issues that are raised first truly represent the participants' major concerns" (p. 114). To avoid premature judgment, the researcher followed the four-step process outlined above on pg. 90 for determining whether a statement represented its assigned indicator.

Although statements such as the above teaching presence example were counted once in the overall tabulation of presences, the researcher also tracked such statements separately by creating a database of overlapping presence statements. In the example

above, a directed facilitation activity (teaching presence) was also connected to an observation about social presence, "... so we interact comfortably here and online." This and similar statements were coded to one presence category, but also placed in a separate database (in this case entitled, "Teaching Presence/Social Presence"). Similar categories were created for "Social Presence/Cognitive Presence," and so forth. Statements in these categories were helpful in checking reliability of emergent data themes connected to learning, and connected to pedagogical practices. They also provided a greater understanding of the subtle interplay between presences and learning, from students' perspectives.

Research Question 1b: Inductive Content and Thematic Analysis

Research question 1b (How does social, teaching and cognitive presence help or impede learning in hybrid courses, from students' perspectives?) was analyzed thematically from the previously coded data statements indicating teaching, social and cognitive presence. A constant comparison analysis (Glaser & Strauss, 1967) was used to explore and develop data themes. Although this process was originally developed for grounded theory research, focus group researchers have also used the method for focus group data, regardless of whether or not the goal of the research includes development of grounded theory. Constant comparison analysis is recommended when focus group research involves multiple groups or large numbers of groups, so that researchers can assess saturation generally as well as cross-group saturation specifically (Onweugbuzie, Dickenson, Leech, & Zoran, 2009). This process is called emergent-systematic focus group research, "wherein the term emergent refers to focus groups that are used for

exploratory purposes and systematic refers to ... focus groups that are used for verification purposes" (p. 6). Within constant comparison analysis, an inductive, rather than deductive coding process is often used in the initial phases of analysis. The following process for constant comparison thematic analysis was used (Creswell, 2007; Onweugbuzie, Dickenson, Leech, & Zoran, 2009; Stewart, Shamdasani and Rook, 2007).

Review presence statements for each course separately.

During this step, the researcher reviewed the social, teaching, and cognitive presence statements for each course, identifying the segments relevant to the research question (what was helping or impeding learning). Statements were again the unit of analysis, and were organized into a separate database for each course, grouped by type of presence, but not by sub-indicators of each presence, as was the case during the coding process for research question 1a. The researcher needed to review the statements apart from their specific coding identification to prepare for open, inductive coding (Elo & Kyngas, 2007).

Identify descriptive units.

The initial step in the constant comparison analysis was to "chunk" data into small units for each course, assigning a descriptor for each unit. There are many methods for developing initial descriptors. The researcher began by taking note of nouns, phases and adjectives that were repeated often and seemed central to the data statements (Rubin & Rubin, 2005). Meaningful text segments occurring in connection to one another were also noted, such as "direct contact," and "getting to know." Commonly used adjectives were noted also, and these included "more" and "direct" (e.g., direct: clarification,

feedback, interaction, contact). Terms and phrases signifying various affect, positive or negative, were also noted at this stage (Stewart, Shamdasani & Rook, 2007). At times, this was possible due to the student notetakers' style of summarizing discussions, such as "Our professor is **AWESOME** and this class makes us **MISS OUT** on benefitting from him **1/2** of the time." The researcher also consulted observation notes from each course to assist with this process. Finally, terms and phrases unique to the study context were noted, such as "Detriment 2 Learning," a commonly expressed derogatory derivation of the University's course management system, Desire 2 Learn. For each course, words, phrases and statements forming recurring patterns of meaning were chunked into small units identified by codes.

The initial goal of coding at this stage was to identify emergent units that were primarily descriptive, in that they included "descriptions of participants' concepts and beliefs; they stay close to the data categorized, and don't ... imply a more abstract theory" (Maxwell, 2005, p. 97). Unlike much focus group research, one level of descriptive summary had already occurred before analysis: the groups' discussions as summarized by the group recorders at the time of the assessment. For this reason, it was important to stay as close as possible to participants' own words and concepts, identifying units of meaning that were grounded in participants' interpretation of phenomena and events. The process of developing descriptive units for each course concluded with a researcher review of the analysis using following questions adapted from Jorgensen (1989):

1. Based on the initial explication of researcher assumptions, what findings were expected, and what was unexpected?

2. What was surprising?

3. What are notable uses of expressions such as jargon or metaphors, that might provide additional insight into students' perspectives?

4. Finally, what is the researcher's initial interpretation of the descriptive categories?

An important lesson was learned from this process, namely that it was extremely valuable to have captured this reflective process when returning later to each course to check emerging themes against early descriptive categories. It was precisely the comparison between early and subsequent assumptions that led to recognition that some data categories needed to be reexamined.

Return to the data.

At this stage the presence data and raw data for each course was revisited and compared to the descriptive codes with the purpose of determining whether there were meaningful terms or phrases not captured by the codes, and whether codes were representative of multiple groups' perspectives. Steward, Shamdasani & Rook (2007) caution that

It is relatively easy to draw incorrect conclusions from a focus group if care is not taken to ensure representative sampling of the content of the group discussion. Almost any contention can be supported by taking a set of numerically unrepresentative statements out of the context in which they are spoken. (p. 122)

This process resulted in some data sorting; for example, it was discovered that students' perspectives on peer interaction contained a wider range of associations with social, teaching and cognitive presence than originally perceived by the researcher.

Group descriptive codes into categories.

In the second stage of constant comparison analysis, the codes for each course were grouped into thematic categories. This process involves an additional level of interpretation. As Elo and Kyngas (2007) observe

... creating categories is not simply bringing together observations that are similar or related; instead, data are being classified as 'belonging' to a particular group and this implies a comparison between these data and other observations that do not belong to the same category. The purpose of creating categories is to provide a means of describing the phenomenon, to increase understanding and to generate knowledge. (p. 111)

Steward, Shamdasani & Rook (2007) suggest that "context units" provide a systematic interpretive foundation for this type of analysis, where the researcher identifies similarities and differences in the contexts (i.e., surrounding words, phrases and statements) in which recurring descriptive units are used. Key words and phrases associated with particular contexts are particularly useful for increasing the reliability and validity of findings when entire verbatim transcripts are not available. For example, the phrase "getting to know" was primarily connected to peer interaction, occasionally connected to professor interaction, and almost exclusively associated with the classroom setting, rather than online. In this way, context units provide a referent for the descriptive units such that the researcher's interpretations remain grounded in participants' perspectives.

Emerging themes.

The third stage in the analysis involves developing themes representing the relationships between categorical units (Elo & Kyngas, 2007; Steward, Shamdasani & Rook, 2007). In this process, "[s]ubcategories with similar events and incidents are

grouped together as categories and categories are grouped as main categories ... The abstraction process continues as far as is reasonable and possible" (Elo & Kyngas, 2007). Thematic categories must be conceptually and empirically grounded. Themes may be explicitly stated by participants, or may emerge when looking for similarities in the ways participants in different focus groups interpret their experiences. The researcher once again applied the "context units" framework (Steward, Shamdasani & Rook, 2007) to provide a systematic interpretive foundation. At this stage, similarities and differences in the contexts surrounding the categorical units were continually compared to test emergent themes.

Finally, once substantive themes are identified, the researcher must once again reexamine the data for confirming and disconfirming evidence that the themes are grounded participants' perspectives (Rubin & Rubin, 2005). This "hermeneutic circle" approach partially addresses the concerns of validity and reliability within an interpretive framework, which asks the investigator to make sense of things not immediately apparent to the research respondents, yet demands that interpretive categories be grounded in the data (Denzin, 2005; Jorgensen, 1989). The final analytic framework was thus grounded within the perspectives of the student respondents, constructed simultaneously within the researcher's interpretive framework that built upon and made meaning of, but did not substitute for, the respondents' perspectives on hybrid learning.

Cross-Course Comparison

When constant comparison analysis was completed for each individual course, the comparative process was repeated across courses using the previously developed descriptive, categorical and thematic units. The researcher reviewed the units and categories across the data from the thirty-nine courses, noting recurring patterns. Once cross-course thematic categories were developed, the researcher once again reviewed each of those categories in comparison to descriptive units across courses. In other words, was a given cross-course thematic category grounded in representative, descriptive units from multiple courses? Finally, larger themes emerged from the cross-course thematic categories. Figure 6 illustrates one example of an abstraction process from cross-course comparison analysis. In this case, the overarching theme emerged as "Classroom as Central to Learning."

Within-course and cross-course analysis was at times a humbling experience for this researcher. For example, "more class, more learning" was not conceived as a thematic category early in the analysis. Instead, it was connected primarily to descriptive units within peer interaction. As time progressed, the comparison of categorical themes with descriptive units within courses, and particularly across courses, revealed that students' perspectives on class time had complex implications beyond just social presence. It was a valuable reminder to consider the subtle nuances of meaning that can be missed in the ongoing work of classroom assessment research.

Research Question 1c: Pedagogical Practices Associated with Presence

Deductive Content Analysis

To identify pedagogical practices associated with presence, the researcher returned to the database of indicators for each presence. Because the literature contains no examples of qualitative analysis of students' perspectives on pedagogical practices associated with presence, the pedagogical practices associated with each presence were compared to a pedagogical roles framework adapted from Berge (1995) and used by Skibba, Kaleta and Joosten (2007) to study instructors' experiences with hybrid teaching. The framework is located in Appendix D.

Identifying pedagogical practices.

First, the researcher conducted an initial review of presence indicators with attention to pedagogical practices. The goal was to achieve a fresh impressionistic view of students' observations; the researcher took notes on her observations but made no other attempt proceed with analysis. Next, each indicator of social, teaching and cognitive

presence was reviewed from all course data to determine whether or not it contained observed pedagogical actions or behaviors. Students' observations often contained *implied* pedagogical actions, such as, "Discussions online are interesting and deep." Although it was likely that the instructor's participation and/or facilitation strategies influenced the observation, they were not explicitly mentioned and would thus require inappropriate inference. Therefore, only observed pedagogical actions or behaviors explicitly mentioned by students were coded. For example, "Her online discussion questions prepare us to think more critically in class" was found within an indicator of teaching presence, and was coded within "pedagogical role" according to the matrix. The resulting grouping for this and similar statements was, "Teaching Presence/Pedagogical Role."

Pedagogical practices were occasionally identified in statements indicating more than one presence. In these cases, the procedure was the same as described earlier during deductive content analysis of presence. The example, "More specific directions for posts so that they are more informative and can promote greater exploration of topics" was coded as Teaching Presence/Pedagogical role, as the students were primarily requesting a directed facilitation practice. However, it was also placed in a separate database entitled Teaching Presence/Cognitive Presence/Pedagogical Role." As with indicators of more than one presence, these overlapping categories were useful in checking reliability of emerging pedagogical themes, as well as understanding how pedagogical practices were associated with connections *between* presences, from students' perspectives.

Pedagogical practices and presence: emerging themes.

Once pedagogical practices had been identified, the process of thematic analysis of the relationship between pedagogical practices and presence was similar to the constant comparison analysis used for research question 1b, as follows: (a) review pedagogical practices for each individual course, (b) identify descriptive units, (c) return to pedagogical practices and presence data to check descriptive units, (d) group descriptive units into categories, and (e) evaluate thematic categories in comparison to indicators of social, teaching and cognitive presence for confirming/disconfirming evidence of themes.

As themes and subthemes emerged it became evident that some pedagogical practices observed by students in connection to presence were connected to one pedagogical role, while others were connected to two, three or four roles simultaneously. The implications for pedagogical practices requiring multiple roles is not discussed widely in the literature (Kaleta, Skibba & Joosten, 2007) and the implications for this finding will be presented in chapters four and five.

Report to HU Hybrid Participants

Prior to beginning the final step in the analysis, organization and explication of findings, the researcher sent a four-page executive report of findings to the thirty-nine faculty whose course data were analyzed. This was done not only because it was promised to faculty, but also as a check with participants to evaluate the validity of the researcher's interpretations (Kirk & Miller, 1988; Creswell, 2007). It is also consistent

with ethical considerations related to reciprocity in qualitative research (Creswell, 2007), or a concern for how participants may gain from research efforts. Many faculty acknowledged the summary report with appreciation, confirming that they "could relate" to the findings. One person wrote that "... your findings put some language on the questions I had after teaching the class." Others asked questions, or requested more information about presence in the context of hybrids. The following response, used with permission, was echoed in several reactions to the idea of presence:

I wish we had more information about this prior to teaching the course ... looking back I can see what a difference it could have made. As a researcher first, teacher second I've never been as good at the social stuff. It was discouraging to read the course evals. saying that I didn't care about the online part when I had spent so much time setting it up.

As difficult as it was read words such as "discouraging," in some of the email, it was confirming to hear that students' perspectives across courses, and the researcher's interpretations, also resonated with faculty. The next chapter presents study findings, concluding with an overarching interpretive framework that provided greater understanding of divergent perspectives on hybrid learning and pedagogical practices.

Chapter IV

Findings

The purpose of this study was to understand how social, teaching and cognitive presence is connected to students' perceptions of learning in hybrid settings. Assessment data from thirty-nine hybrid courses was examined to answer the following questions:

What indicators of social, teaching and cognitive presence emerge from students' perceptions of learning?

How does social, teaching and cognitive presence help or impede learning in hybrid courses, from students' perspectives?

What pedagogical practices are associated with indicators of social, teaching and cognitive presence in students' perceptions of learning?

The first three sections of this chapter present findings based on the secondary research questions: (a) indicators of social, cognitive and teaching presence, (b) students' perceptions of how indicators of social, teaching and cognitive presence help or impede learning, and (c) pedagogical practices associated with presence. The final section presents an interpretive cross-course analysis informed by two meta-themes: integration and inquiry.

Indicators of Social, Teaching and Cognitive Presence

As explained in chapter four, the first phase of analysis was a deductive qualitative coding of presence indicators guided by the question, what indicators of social, teaching and cognitive presence emerge from students' perceptions of learning?

This section summarizes the findings that resulted from coding indicators of social, teaching and cognitive presence from midquarter assessment data focused on students' perceptions of learning in hybrid courses. Numbers and types of indicators from all courses in the sample will be presented first, followed by comparative analyses of indicators across sophomore, junior and senior levels. The section will conclude with representative examples of statements indicating social, teaching and cognitive presence. The purpose of this section is to provide a general overview of the numbers and types of presence identified in students' statements about learning in hybrid settings; discussion of thematic analysis of statements indicating presence will be presented in subsequent sections.

Data from each course revealed numerous indicators of each presence. A total of 1,299 indicators of social, teaching and cognitive presence were coded from 2,057 statements, or 63% of statements about students' experiences of learning across all courses. Of the presence indicators identified in the data, 428 social presence, 673 teaching presence and 198 cognitive presence were coded, revealing that all of the presences were perceived by students as connected to their experiences in hybrid courses.

In comparison to social and teaching presence, the smaller number of cognitive presence indicators was not surprising, based on the similar findings in the literature (Rourke & Kanuka, 2009), and results from the researcher's earlier pilot study (see pgs. 82-83). In addition, it is possible that students' responses to "What is helping you to learn" could have been interpreted as "What is helping you to (trigger, explore, integrate, resolve, etc.)." Because the assessment process took place relatively early in the quarter,

some pedagogical and course activities potentially resulting in additional indicators of cognitive presence (integration and resolution) may not yet have been fully incorporated into some courses. However, given that the data represented large numbers of students reflecting together in groups about their learning experiences, it was anticipated that somewhat more indicators of integration and resolution would be present in the data. On the other hand, the number of exploration indicators suggests that some students were aware of, and commented upon aspects of cognitive presence in their hybrid courses.

The greater number of teaching presence indicators was not expected, however, based on the researcher's pilot study, in which social presence indicators outnumbered teaching and cognitive presences. However, the pilot study consisted of six courses at the junior, senior, and graduate level, whereas the data in this study contained responses from sophomore, junior and senior level students. The researcher wondered whether responses differed for undergraduate students, particularly students with different levels of postsecondary experience. When separating the data indicators by student level, additional response patterns emerged. Table 5 summarizes the number of statements indicating social, teaching and cognitive presence by student level, in comparison to the percentage of students in each level.

Table 5

Indicators of Presence by Student Level in Comparison to Percentage of Students in the Sample

Student Level	Percent of Sample	Social	Teaching	Cognitive
		Presence	Presence	Presence
		n = 428	n = 673	n = 198
Sophomore	701 (38%)	174 (40%)	322 (48%)	57 (29%)
Junior	886 (48%)	195 (46%)	284 (42%)	97 (49%)
Senior	258 (14%)	59 (14%)	67 (10%)	44 (22%)

This analysis revealed different patterns connected to student level, particularly for teaching and cognitive presence. Whereas the percentages for indicators of social presence are roughly equivalent to the representation of students in each level, the sophomore student data contained significantly more indicators of teaching presence, compared to their numbers in the total student sample. Junior and senior level student data contained more indicators of cognitive presence, in comparison to the sophomore students. Since significant numbers of sophomore and junior level students were in large enrollment courses, data from these courses was isolated to explore the potential impact that these course settings may have had on the data, particularly upon teaching presence. Heppner (2007) observes that “large enrollment course” is a relative term, impacted by many situational factors, including discipline, student level, the nature of the subject matter, and institutional history. Although large courses are generally considered those with one hundred or more students (Heppner, 2007), at H.U., large courses have

been relatively few in number compared to other state institutions of similar size, and with a few exceptions, space limitations historically prohibited class sizes above one hundred-fifty students. Therefore, given the institutional context, in this study a "large enrollment course" was defined as a course with seventy-five students or greater. There were three sophomore and five junior level large enrollment courses, with 328 and 467 students enrolled, respectively. The following table summarizes data for teaching presence from sophomore and junior students in large enrollment courses.

Table 6

Indicators of Teaching Presence in Large Enrollment Courses

Student Level Data	Percent of Total Class	Teaching Presence Indicators	Percent Difference From Total Class Level
Sophomore (n = 328)	18%	236 (35%)	+ 7 %
Junior (n= 467)	25%	148 (22%)	+ 3 %

When Table 6 and Table 5 are compared, it can be seen that data from large courses at the junior level contained greater percentage of teaching presence indicators than all junior courses: Data from all juniors (48% of all students in the sample) contained 42% of teaching presence comments, whereas junior level students in large courses (25% of all students) made 3% more teaching presence comments than all juniors (22% percent of all teaching presence comments). However, sophomore data from large courses (18% of total student sample) contained 35% of teaching presence indicators, a 7% increase from all sophomore teaching presence comments. This result suggests that

large course settings may have contributed to the number of statements connected to teaching presence in hybrid courses, and that student level (in this case, sophomore) may have additionally impacted students' perceptions of learning related to teaching presence.

Presence by Category and Student Level

Additional comparisons can be made across student levels with respect to the categories comprising social, teaching and cognitive presence. This section will present tables illustrating data numbers and representative comments for categories within each of the three presences. When representative assessment data statements are presented, the following conventions will be used:

[Text within brackets, not italicized]: Text added to provide context or complete sentences, where appropriate. Many data statements were condensed or truncated by note takers during the focus group process. Text was manually added to data statements in writing by the researcher during focus group sessions, approved by student participants.

[*Text within brackets, italicized*]: Text used to replace a reference to an instructor name, course name, or course activity that could otherwise reveal the identity of a course.

Note: "D2L" often appears in students' comments and is the shorthand version of the name of the University's course management system, Desire 2 Learn.

Social Presence Indicators by Category and Student Level

The following table summarizes social presence categories of open communication, group cohesion and affective/interpersonal by student level.

Table 7

Social Presence Indicators by Category and Student Level

Social Presence (n =428)	Sophomore	Junior	Senior
Open Communication			
What is helping (171)	76	87	8
What could be changed (93)	41	39	13
Group Cohesion			
What is helping (45)	10	16	19
What could be changed (51)	14	25	12
Affective/Interpersonal			
What is helping (31)	12	15	4
What could be changed (37)	21	13	3
	174	195	59

The large numbers of indicators under “open communication” reflected the number of social presence indicators within students’ observations about peer interaction in class and online, as well as suggestions about interaction in both formats. The smaller numbers of group cohesion indicators were not expected, nor were the small number of indicators reflecting affective/interpersonal aspects of learning. Possible reasons for these gaps will be explored later in this chapter.

Comments reflecting open communication were by far the most common social presence indicators in the data, and were dominated by observations about discussion, interactions with peers and interactions with professors. Many of these observations indicated aspects of hybrid settings that facilitated open communication:

Meeting in class helps us because we have the chance to get to know the people we interact with online.

Online discussions help for ... getting to know members of our class that is not allowed in a normal class.

On the other hand, some indicators reflected students' desire for more interaction with other course members. For example:

We want more time to get to know other students in class ... posts are informative but they can't substitute for the real time connections in class with others.

Class time should have more student interaction to compliment how we interact online, instead of just powerpoints. We get to be involved online but in here we're just muted.

Indicators of group cohesion primarily contained observations about discussions and activities that encouraged collaboration, or suggestions for more collaborative activity. For example:

Online the groups have created a unique learning environment that builds from our class time ... where we discover additional information as a collective.

We miss [*online cooperative activity*] because there is noticeably less activity now. [It was] helpful [to] see how others were working through material.

Some group cohesion indicators reflected the categories of expressing and listening to diverse opinions, and enhancing group communication:

More classroom time to build community in the groups would improve group projects overall and online experience.

In class time, the preparation for groups helped us to get more comfortable with opposing views on [*course topic*], and this helped with better online environment, where groups express themselves openly.

The final social presence category, affective/interpersonal, contained the least number of indicators. Many comments focused on comparing face-to-face and online formats, with respect to how those formats contributed to or detracted from interaction:

Class interactions [are] better for this class. We do not like role plays online! They are very dry and emotions are missing.

Communication is easier online than in face to face. [We] Can communicate in a relaxed way that builds connection and community.

The class experience is more open than D2L. WHY: In class we can see expressions, hear tones of voice when we share experiences that make the topics meaningful.

Teaching Presence Indicators by Category and Student Level

Comments indicating teaching presence were also separated by category and student year in school, as is illustrating in the following table.

Table 8

Teaching Presence Indicators by Category and Student Level

Teaching Presence (n =673)	Sophomore (n = 322)	Junior (n = 284)	Senior (n = 67)
Design and Organization			
What is helping (76)	36	27	13
What could be changed (203)	92	96	15
Facilitation of Discourse			
What is helping (89)	26	43	20
What could be changed (87)	47	31	9
Direct Instruction			
What is helping (98)	50	41	7
What could be changed (120)	71	46	3

Numerous indicators representing all three teaching presence categories were identified in statements about learning; however, course design and organization, as well as direct instruction were the most common. In comparison to social and cognitive presence, teaching presence categories contained more suggestions for changes to improve learning, including suggestions for changes to course design, direct instruction, and to a lesser but still significant degree, facilitation of discourse. Comments within the category, “What is helping you to learn” connected to facilitation of discourse were somewhat more common at the junior and senior levels than for sophomores.

Course design and organization indicators illustrated students’ observations about teaching presence online and within the classroom. There were a wide range of design and organization comments, as the following examples illustrate:

Instructor has well-designed modules and tutorials online that show us if we are comprehending material, automatically.

Listening to the lectures online and then having time in class to in-depth review it is like having [the] professor there in multiple ways.

Why is this a hybrid. We don't think it's different from any other course we have had that uses D2L, except we just don't get access to a professor as often!

Facilitation of discourse included indicators primarily focused in the areas of actions that reinforce or inhibit the development of community, and facilitation of engagement in dialogue and exploration:

Discussion boards need attention from professor. People [are] becoming rude.

In this class we are learning how to pull off an extensive group project working together in real time and online. [Our] Professor has been very helpful in providing timely guidance on how to do this.

Class time could be used to summarize/tie things together rather than the detailed lecture. Our instructor moved the former interactive part of class to only online, very unsatisfying.

Numerous comments were also coded within the final category of teaching presence, direct instruction, particularly in the areas of feedback, clarification and guidance. For example:

Online lectures let us return to ideas as often as needed, but in class lecture lets us clarify confusions immediately. By the time we get to class we forget what we were confused about [online].

Although we were worried at first about not enough input from prof, she is very available throughout the week for D2L questions so that part [is] OK.

Check in online and make sure we are on the right track.

Cognitive Presence Indicators by Category and Student Level

Indicators of cognitive presence, though much lesser in number, also followed some patterns connected to the categories "triggering," "exploration," "integration" and "resolution" as illustrated in table 9.

Table 9

Cognitive Presence Indicators by Category and Student Level

Cognitive Presence (n =198)	Sophomore (n =57)	Junior (n = 97)	Senior (n =44)
Triggering			
What is helping (17)	8	5	4
What could be changed (16)	1	11	5
Exploration			
What is helping (76)	25	40	11
What could be changed (37)	12	19	6
Integration			
What is helping (25)	7	10	8
What could be changed (11)	3	5	3
Resolution			
What is helping (11)	1	6	4
What could be changed (4)	---	1	3

Cognitive presence was primarily comprised of indicators connected to exploration. To a lesser degree, students also commented on aspects of triggering, or events and/or course materials that present an idea, issue, problem or dilemma to be subsequently explored, sometimes using metaphors like “springboard” or “doorway.” However, some groups were less clear about how to proceed than others, as is illustrated in the following two examples:

We need a clearer path for how to go forward with what was introduced in class, when we are online.

Class activities are excellent springboards for our further work/online has the required resources needed.

In the case of exploration, the majority of indicators occurred in the context of comments about student discussions, followed by comments about group work or peer-to-peer collaborative efforts:

Additional time to share work with classmates online and exchanging comments, encouragement, critiques etc. [is a] thorough and efficient way to learn, expand our thinking.

[We get] More time w/[with] readings b/f [before] lecture, and get more perspectives from the class to compare with our own.

Discussions [are] not as helpful. They could promote better expansion of class material.

Indicators of integration were found within comments on course structure or specific activities, observing instances of integrative activity, or challenges moving beyond integration:

[*Ongoing collaborative activity*] online good for mutual problem-solving and generating different applications that are brought to class for review.

In [online] groups there has been a lot of different research compared, but we are not clear about what if anything we are supposed to do with it.

Finally, a small number of resolution indicators were identified. As was the case with indicators of integration, these indicators were most often embedded within observations about course activities, instructor actions, or course design. For example:

Lectures [are] well combined with online requirements, this benefits us by continual involvement and testing out solutions in the group interaction.

Working together to apply ideas or even propose strategies would be helpful.

Indicators of Presence: Summary

This section summarized the results of a content analysis to answer the question, what indicators of social, teaching and cognitive presence emerge from students' perceptions of learning? The analysis revealed that indicators of all three presences were connected to students' perceptions of learning in hybrid courses. Teaching presence indicators were most common, followed by social presence. Cognitive presence indicators were the least common, and of those statements indicating cognitive presence, most were connected to "exploration." Data from sophomore level students and students in large enrollment courses revealed more statements indicating teaching presence, and data from sophomore level students contained somewhat more suggestions for changes in the teaching presence categories of "design and organization" and "direct instruction." Finally, the social presence categories of "group cohesion" and "affective/interpersonal" represented fewer indicators than was expected.

The identification of presence indicators in data on student perceptions of learning revealed some patterns that warrant further investigation. For example, what can be learned about students' perspectives on hybrid formats from the numerous indicators of presence in the categories of "design and organization" and "direct facilitation" connected to suggested changes to improve learning? Are there recurring patterns within indicators of "open communication" connected to facilitators of learning? Why might so few

student observations be reflected the “affective/interpersonal” category? The following two sections present the results of analysis guided by research question 1b: students’ perceptions of how social, teaching and cognitive presence helps or impedes learning in hybrid courses, followed by findings on pedagogical practices associated with indicators of presence. The chapter will conclude with a discussion of possible connections to the patterns revealed by the initial coding analysis, pedagogical implications suggested by the findings, and an analysis of the relationship between all course themes connected by integration and inquiry.

Thematic Analysis of Presence Indicators

The previous section presented the results of the analysis to identify indicators of social, teaching and cognitive presence from focus group assessment data in hybrid courses. Once indicators and sub-categories of each presence were identified, the second phase of the study involved a thematic analysis guided by the second research question:

1b: How does social, teaching and cognitive presence help or impede learning in hybrid courses, from students’ perspectives?

Returning to the data set of presence indicators from each course, thematic analysis of the presence data for each of the following original assessment questions was conducted:

1. What about this course is helping you to learn?
2. What could be changed to improve learning, and
3. What specific suggestions do you have to bring about those changes?

The first step was thematic analysis of each individual course, followed by a cross-course thematic comparison across the data set. Table 10 summarizes the themes from the cross-course analysis.

Table 10

Students' Perspectives on Presence and Learning

Themes (What is Helping/Hindering Learning)		
Sub-themes		
Interaction with Peers		
Subtheme One: Interaction as key to learning		(Social/Cognitive Presence)
Subtheme Two: More interaction		(Social/Cognitive Presence)
Subtheme Three: Meaningful interaction		(Social/ Teaching/Cognitive Presence)
Classroom as Central to Learning		
Subtheme Four: More class time, more learning		(Teaching/Cognitive Presence)
Subtheme Five: More time "together"		(Social Presence)
Perceptions of Blending		
Subtheme Six: Connection between formats		(Teaching/Social/Cognitive Presence)
Subtheme Seven: Lack of connection		(Teaching/Social Presence)
Subtheme Eight: Is this a hybrid?		(Teaching Presence)
Subtheme Nine: Reactions to Blending:		(Teaching/Social Presence)
Student Characteristics		
Course type		

Three primary themes emerged across courses: interaction with peers, classroom as central to learning, and perceptions of blending. The three themes were each comprised of subthemes (nine total). Subthemes emerged within one or more presence indicators; for example, the subtheme "interaction as key to learning" under the theme, "interaction with peers" emerged primarily within indicators of social presence, followed

by cognitive presence. The following sections will discuss the themes in detail and illustrate findings with representative data statements.

Interaction with Peers (Getting to Know You)

It would be difficult to understate the veracity of the theme, "interaction with peers" in this data set. It is reflected in the number of indicators in presence categories such as "open communication," "facilitation of discourse," and "exploration;" it is connected to a number of comments about pedagogical practices to be discussed in the following section, and it emerged as a theme within nearly every course in the data. The manner in which the theme manifested within courses varied; however, the variations cohered into three major patterns: the centrality of interaction to students' learning experience, requests for more peer interaction, and observations about interaction perceived as meaningful, or relevant to students. Each of these subthemes is illustrated below.

Subtheme One: Interaction as Key to Learning

"Interaction as key to learning" sums up the primary sub-theme under interaction with peers. On more than one occasion, focus group note takers simply drew the popular online social network, facebook, "thumbs up" symbol with the word "like" next to words expressing positive reactions to peer interaction and its relationship to learning. This symbolic "like" shorthand was appropriate in more than one way: In keeping with popular online social media venues, the importance of peer interaction was most often expressed in the context of social presence indicators. Equally appropriate given the

academic context, some peer interaction comments were also connected to cognitive presence indicators, particularly in the category of exploration. In the following examples, note the references to "getting to know," which were echoed numerous times across many courses:

Feeding the online work and discussion back into the class deepens our connection to other people in class, [which is] important in a school where you really don't get to know others in classes that well.

In class and online discussions [both help learning], because in class we can get to know the people we are speaking to online.

Group discussions on D2L expose us to a wider range of students' views than we can get in the classroom.

Subtheme Two: More Interaction

A corollary to the centrality of interaction was the subtheme "more interaction" that sums up one of the most commonly expressed requests for changes to improve learning. When students elaborated on this request, once again peer interaction was primarily connected to social presence, occasionally to cognitive presence (exploration and integration), and teaching presence (course design):

[Class] Time seems to be at a premium in this course, but we still need more chance to get to know each other, connect with others who have similar interests.

We would like a group project (yes really!) because so much of hybrids are non-interactive. Doing this would be a good way to build camaraderie among students.

Please reinstate more cooperative activity. In the real world, people look to see how others are doing [*discipline*] and adapt those methods, and those of us who really care about becoming good [*field experts*] want the opportunity to see how others are applying solutions to problems and why.

Subtheme Three: Meaningful Interaction

The final subtheme, "meaningful interaction" expressed students' perspectives on the importance of authentic, engaging interaction that encouraged connection with others. Although these statements were often connected to social presence indicators, also note occasional connections to teaching presence, particularly facilitation of discourse, as well as indicators of exploration (cognitive presence):

Discussions online help learning by keeping our group in touch with each other about what we are learning and what else we need to keep moving forward with our work.

Online the discussions have created a unique learning environment, where we are discovering information on our own from articles we and our classmates share.

The [instructor's] discussion questions online [are the] most helpful in challenging us to collectively explore further what we've read.

The above examples reflect expressions of engagement and connection; however, students' concerns about engagement and authenticity were more common. Some concerns were primarily associated with indicators of social presence and teaching presence, as in the following:

Structure of online discussions limits potential conversations. D2L is a farce. We can't believe we pay more money to stare at a computer and get uninspired interactions with whoever.

Online discussion [is] not as helpful because [it] doesn't really facilitate good connections with other people. Everyone is just trying to get their work completed, people don't read a lot of what is posted there.

We need more class discussion and time in groups, without which we can't form good relational bonds needed to work together as a community.

Many concerns about authentic, meaningful interaction were dominated by

discussion facilitation and course design comments, both connected to teaching presence:

Discussions are uninteresting. They should require a response so they are more like a discussion.

Online discussions need to be structured differently. Sucks that not everyone in your group is involved.

Once a week class isn't enough for learning [*subject*] ... there are online discussion forums, but are more for just checking if we understood what we read.

More discussion coaching might help for more authentic feeling discussion. [It's] Just something to do and check off right now.

Just as appreciative comments about authentic, engaging interaction contained some references to cognitive presence (exploration), so did some concerns about peer interaction reveal that certain aspects of interaction were not as helpful for collaboration inquiry (exploration) or sustained critical reflection (integration). Although many of these statements contained indicators of both social presence and cognitive presence, some contained indicators of teaching presence and cognitive presence, as in the first of the following examples:

[We would like] More specific directions for posts so that they are more informative and can promote greater exploration of topics.

We wish the online work and discussions were less restrictive ... [We would like] more opportunity in that environment to take things in different directions.

People aren't being critical [online] so it's not helpful. Most comments are just like "good job"

Interaction with Peers: Summary

The theme "interaction with peers" illustrates several dimensions of social, teaching and cognitive presence connected to students' observations about peer interaction and its relationship to learning. Although the value of peer interaction is not unique to hybrid settings, observations about interaction and learning in the context of presence provided insight into hybrid settings. For example, getting to know peers was perceived as an advantage to hybrids in some courses, and it was important to students as a facilitator of more open communication and cohesion (social presence) in both formats. Students observed how one or both formats facilitated or impeded open and/or affective dimensions of communication, often perceiving classroom communication as more personal, while online interaction allowed for exposure to more viewpoints and experiences.

Indicators of teaching presence reflected students' observations about aspects of course design and direct facilitation that promoted or impeded peer interaction. More peer interaction was a common request for changes to improve learning, both online and face-to-face. More classroom discussion was commonly requested, as students perceived an imbalance between online and classroom interaction. Observations about online interaction revealed students' desire for changes to facilitation of discussion in that format, both to promote more open communication (social presence) and more critical exploration of course material (cognitive presence).

Within the theme, "interaction with peers," statements indicating cognitive presence frequently occurred in conjunction with indicators of social presence. The

exploration of course material in the context of peer interaction online and in the classroom helped students to learn by providing opportunities to explore diverse viewpoints on course material. Statements about peer interaction also revealed an interesting pattern when indicators of teaching and cognitive presence occurred together: More direct facilitation was requested for further exploration and integration to facilitate learning.

In addition to peer interaction as central to learning, students in many courses spoke to the centrality of face-to-face class time to their learning in hybrid settings. From the frequent observations connected to presence about various aspects of classroom time, as opposed to online activity, emerged the theme of "class time as central to learning."

Class time as Central to Learning (It's the Real Thing)

Many focus groups affirmed the importance of face-to-face (class time) to learning, often suggesting that this was an advantage of hybrid courses over fully online settings due to interaction with peers and instructor. For example:

Hybrid format helps us to balance our many responsibilities but still get an education and interaction with other students.

We can learn independently but also helps to connect in person with other students and professor.

Have a face-to-face [class time] allows us to hear the teacher and other [students'] thoughts about the topic, because we're often too rushed to read everyone's posts.

Alongside comments about the importance of class time, the suggestion for more class time, which invariably referred to face-to-face time, emerged across thirty-four out

of the thirty-nine courses in the data. Students suggested alternate online/class ratios, such as 75% classroom and 25% online, an additional classroom meeting time, required face-to-face group meetings outside of class, and occasionally, a return to a completely face-to-face format. The thematic subtitle of class time as central to learning, “it’s the real thing,” was inspired by the following focus group conclusion:

We like the flexibility of the hybrid, but class time is obviously the real thing, so something like [a] 75(class)25(online) split would be better.

Although this comment was not connected to indicators of presence, suggestions for more class time that were connected to presence also revealed frequent perceptions of class time as the "real thing," and cohered within the following subthemes: more class time, more learning (teaching presence, cognitive presence), and more time "together" (social presence).

Subtheme Four: More Class Time, More Learning

As the following comments illustrate, students connected more class time with more teaching presence, and by extension, more learning:

Make meeting times longer – we need [professor] who is so much more valuable than D2L (Detriment 2 Learning) !!!

Increased time for face-to-face teaching. Our instructor is outstanding in the classroom and we are cut short ... more teacher, less computer.

Need more time with professor [which is] crucial to learning. If we wanted distance professors we would have signed up for an online program.

More class time and less online. Class time with direction from professor [is] best.

Subtheme Five: More Time Together

Suggestions for more class time were also frequently connected to indicators of social presence, where meeting “together” almost exclusively referred to the classroom and reflected students' concerns for all social presence categories, including open communication, group cohesion and affective/personal dimensions. For example:

[*Course topic*] is not the best for hybrid where meeting less together means not as much comfort level with [*topic*] in front of others.

Class time too short – more discussion, in class, to participate with others.

More time together in class. Groups in hybrid [difficult] because we can't clarify things real time.

Require groups to meet outside of class - no time in class, impossible to reach consensus online.

This class is not the ideal class for an online component, because of the discussion and time in groups, [or] we can't form good relational bonds needed to work together as a community.

Personality and enthusiasm of our professor helps incredibly for learning, however it can't be replicated online. Therefore we have half a professor for more cost.

Occasionally, suggestions for more class time were connected to indicators of cognitive presence, particularly in the categories of exploration and integration:

Not enough time for [integrative activity] because class time is cut short. Need more class time.

Class meetings [are] too short for what we need to accomplish here, which is somehow bring coherence to the massive flux of online work for completion of our projects.

We could meet more often. The time is really not enough to learn and explore all the concepts and ideas this class covers.

Class Time as Central to Learning (The Real Thing):

Summary

Class time was the “real thing” from students’ perspectives for getting guidance, clarification, and instructors’ perspective (teaching presence), personal connection with other students and activities that promoted group cohesion (social presence), and activities that afforded opportunities for exploration and integration (cognitive presence). Since the frequent requests for more class time were connected to the perception that these indicators were in short supply, several questions arise. For example, why was class time perceived as significantly more facilitative of these particular indicators of presence than the online portions of courses? From students’ perspectives, was group cohesion or clarification possible online? Some insight into these and similar questions emerged within the final overarching theme, “perceptions of blending.”

Perceptions of Blending

Students made a wide range of observations about their perceptions of blending face-to-face and online learning, often comparing one to the other or contrasting their learning experiences in the two formats. In the original assessment data, these comments were so wide-ranging across courses that it was difficult to discover a common pattern. Therefore, a surprising finding about observations associated with presence was that students almost invariably stressed the *connection* between their classroom and online experiences.

Subtheme Six: Connection Between Formats.

Observations about online and classroom connection were connected to many indicators of social, teaching and cognitive presence, as in the following:

Online discussion encourages better discussion in class, because we see what others think about issues online before we meet [in class].

[Online] assignments completed after lecture that allow us to actively apply material and check our understanding [are helping us to learn].

Online: discussions are ... reinforced, extend and focused in the lectures.

Hybrid format is a loop that ties it all together and deepens understanding and integration between [*discipline-specific topics*].

Subtheme Seven: Lack of Connection.

Many statements contained aspects of presence perceived as missing from one or both formats, thus hindering connection. Interestingly, aspects of connection that students perceived to help learning were found associated with all three presences, whereas comments about lack of connection were primarily associated with teaching and social presence, with very little indication of cognitive presence. In many cases, students observed a lack of connection with the professor after class meetings, coupled with a perceived disconnect between classroom and online foci:

Class sessions are loaded with information but online seems like we just have to figure out what to do with it [online]. Confusing.

Online [is] hard to understand and confusing as to what is expected each week ... waste of time, more like a fancy way to turn in weekly assignments.

This class seems like a lot of things that have been created to do online to "fill" Time we aren't here learning together in class.

[We] Don't know if professor reads what goes on in D2L, since points get made

that were discussed online ad nauseum [sic] like it was the first time we heard of them.

Instructor could look at online boards. Last two classes felt wasted because we accomplished the same learning online, before class.

Many comments about connection were associated with social presence, particularly ways that connection between formats also facilitated connections to and among other students, as in the following:

Two formats together encourage regular consistent participation from classmates.

Having [*class time for topic*] allows us to connect people with their personalities and working styles, and then have [a] greater comfort level when working with people online.

As with the teaching presence, there were also observations about how the lack of connection impacted social presence:

Pitfalls, challenges and successes of groups are what makes [the] in-class learning deeper, but we think this component is missing online.

More participation from students in class could help bridge the gap between online and in class.

In class is civil because people have been muzzled by the confrontational Environment online.

... we don't have enough class time to really clarify issues with the group projects, [so we] can't make progress online.

The class is two separate classes – online and face-to-face. Face to face = interesting, interactive. Online = drudgery, like taking a class in solitary confinement.

Subtheme Eight: Is This a Hybrid?

The third subtheme related to perceptions of blending was a question that arose across fifteen courses, or over one-third of courses in the sample: Why is this a hybrid? Comments most often reflected the teaching presence categories of course design and direct instruction:

This class is not any different to us than any other course that happens to have a D2L site, except we get less professor for more money.

Don't do much online except submit our work so that it could be "documented" as done on time. Therefore, high fee for hybrids is extremely frustrating.

Doesn't seem like a hybrid, since we don't have much to do online, prof. prefers classroom contact. Love it!

[We suggest] Hybrid course is not needed. The important activities for learning, our professor's knowledge, questions and group activities, [are] all done in class. It's best that way.

These comments reflect two observations connected to teaching presence: the perception of less presence online, and course organization perceived as similar to fully face-to-face formats utilizing a course management system. Although some students seemed unperturbed by the similarity to classroom-based courses, others affirmed the importance of class time, while many students expressed frustration due to the required course fee paid by students for partially online courses.

Subtheme Nine: Diverse Reactions to Blending

The final subtheme reflecting perceptions of blending emerged within comments from students emphasizing diverse reactions to course design. There were many instances of reactions to course design in which students would qualify their observation

in reference to their association with a particular identity or group, and differentiated their learning experiences in hybrids based upon the identified association. The comments isolated for this report are only those that connected diverse reactions to hybrid course design to one or more aspects of presence.

International students.

The researcher routinely provided email contact information for individual students to provide further feedback outside of the classroom assessment sessions. Follow up comments from international students were often sent by email, rather than contributed to the focus groups. The primary presence concerns from international students were connected to course design and interaction with others in class.

It can be harder for international students to complete all the ... communication online, because it is spontaneous week to week what is required so we can't plan ahead.

Writing center has limited appointment for us. [As] ESL speakers, we take a lot longer *[for online collaborative activity]* and get behind a lot. Even American students thinks it's a lot, but for us it's even twice longer.

If you don't want to look bad in front of others for your English you need to spend a lot of time, and this is harder with so much [online] discussion required. Even though it is named as a discussion, it is really just writing assignment, a very long writing assignment in front of everybody else in class, all the time.

Returning students.

Students returning to college after a prolonged absence were commonly concerned about direct access to instructors and unspoken expectations about the course management system, as well as online learning requirements, as in the following examples:

Hybrid courses are not for returning students, [there are] too many things assumed That we should know that are never explained (what happens if the technology breaks down or you have a miscommunication due to not seeing your professor).

Some students, like some us [who have been] out of college for a long time, need more guidance from the professor in a partly online class.

Students with less access to technology.

Some students differentiated themselves from their peers in terms of their access to technology. As with international students, many of their comments were shared privately on separate sheets of paper or email. Their concerns connected to presence were access to professor outside of class, and participation in peer interaction.

Hybrid classes seem to have many more tight deadlines in between class meetings, compared to completely online [classes]. I have to share a computer at home with many others in my family. Since I can't get online whenever I want, it would be easier to have more flexible deadlines ... discussions get closed, and I am shut out of the conversation. I would still prefer my kids got their homework done.

It's important for the professor to know that I can't just email him every time I have a question. I have never taken an online class, due to the basic fact that right now in my life I can't afford a computer at home ...

It's a lot harder when your technology is not good ... it is harder to participate. Online part is hard ... not as active in my group [online] because I don't own a computer and I work a lot ... can't always get [computer] labs during computer hours.

Perceived learning styles.

Within focus groups, students often discussed different reactions to hybrid learning based upon their perceived orientations toward learning, or learning styles, in this case learning in "direct" (face to face) contact with other students and professor. The

frequent use of the terms such as "some of us" reflects the different reactions of students during these group reflections on learning in hybrids:

Online is OK but some of us need more human interaction for learning.

[It is] harder to get to know professors in a partially online class. Some people [in our group] don't care but others do, it helps them learn better.

Human contact (student teacher, student student) is important to learning. We disagree about whether this is more important than the online lectures, conclusion [was] different learning styles.

Our group had a long discussion about whether we learn more from personal contact with instructor in class than just staring at the computer.

Two [group members] feel strongly that we learn better when we interact with people face to face.

Sophomore level students.

The final category of student characteristics was one not identified explicitly by students. Given the greater number of comments indicative of teaching presence made by sophomore students, the researcher wondered whether there were qualitative differences in the nature of comments connected to teaching presence for this group, in comparison to juniors and seniors. This analysis proved more difficult than expected; it initially appeared that many comments about teaching presence were similar across grade levels, and sophomores just made them more often (and more vehemently with exclamation points, capital letters and underlines). However, with time it became increasingly apparent that teaching presence indicators of direct instruction and facilitation of discourse from sophomores contained over twice as many references to the importance and centrality of instructor expertise, and how, in students' views, the hybrid

format impacted access to expertise. The following are just a few representative examples from sophomore students:

[Online] discussions are better now that instructor confirms in class whether or not we got all of the points we were supposed to know.

Having in class meetings is important because we can better understand class material when it is addressed in class by our instructor.

More time in class since face to face part lets us to hear the teacher's view on the topic! We want more lecture and elaboration from professor. We are tired of post after post from people who don't know much more than us.

In class instruction [is] best where we have contact with the instructor and HIS vast amounts of knowledge.

Make meeting times longer – [professor] is so much more valuable than D2L (Detriment 2 Learning) !!!

... being in class with the professor is WAY more helpful than doing things on a computer, isn't learning with the professor why we're here?

Online discussions [are] NOT helpful. We have trouble making sense out of articles until we get to class and get to discuss them with the professor.

It is important to distinguish the emphasis on professor expertise illustrated in these comments from those comments that comprised the earlier subtheme, "more class, more learning." As discussed earlier, many students perceived class time as a primary context for interaction with instructors, rather than online. However, sophomores in particular emphasized more professor *expertise and authority* as facilitators of learning, and hybrid course design was perceived by many sophomore students impede access to instructor authority and expertise. Sophomores were also more critical of course design features that were perceived to remove them from perceived sources authority and expertise, such as time spent interacting online with peers.

Reactions Based on Course Format

In addition to student characteristics, characteristics of courses were mentioned in relation to presence: specifically, (a) condensed term (four week) course formats, and (b) community-based course formats.

Condensed term.

There were seven condensed term courses in the sample, and in all seven courses a prominent course theme reflected students' views that condensed term courses were not ideal for hybrids, primarily for reasons connected to teaching presence:

Course [is] not good for summer format. Class time is too short and compressed for help and direction from professors.

A lot things to do in such a short term, even more than compared to other summer courses without regular professor contact ... does not fit for summer.

Partly online summer session, BAD! Not enough hours in a week to solve all the problems that come up online, and taking class time to do it compounds problem, even less time for teaching.

Community-based (service-learning) courses.

Students in community-based courses often commented on the confluence of two types of course formats: partially online/classroom, and partially university/partially community. The most striking commonality between the six community-based courses in this sample was the observation by students that online activities were irrelevant in comparison to their community service responsibilities. If class time for many students was "the real thing" for learning in hybrids, community service was the real thing for students in community-based courses, regardless of online activities. In these courses,

"presence" was expanded to include community partners, and activities online were not always perceived as germane to community service:

Being partly online is not ideal, because of the responsibilities we have to [community partner] ... We need more time with [community partner] but this is cut short because we meet so seldom.

[Community project] involves a lot of emotions. We find it difficult, if not impossible to share our service experiences meaningfully online.

Working together in class on [community project] [is helping to learn]. Discussion online not relevant.

The [community service activity] is helping us learn. We are: finding different resources to explore solutions, forming a collective, and hopefully will apply knowledge toward the successful creation of a [community project/need]. Too little time in class to support this, and no clue how the online work applies to it.

[There are] Too many things to track in this class between online, class, community work, homework. Either streamline or cut hybrid part – [need] more face time with our instructor because none of us have done anything like this before. Mental/psychological overload.

Perceptions of Blending: Summary

Perceptions of blending connected to presence emphasized the integration between face-to-face and online learning. Students' observations revealed their perceptions of teaching presence in both formats, and aspects of course design that allowed students to connect activities and learning in class and online. Students also commented on aspects of course design that strengthened their social connections to peers, such as collaboratively building upon their online work in the classroom.

Students' observations about blending also reflected aspects of presence missing from one or both formats, thus hindering connection between formats. Aspects of

connection that students perceived to help learning were found in relation to all three presences, whereas comments about lack of connection were found in association with teaching and social presence, with very few indicators of cognitive presence. Teaching presence comments within the subtheme, "lack of connection" often reflected a perception of less teaching presence after class meetings, coupled with a perceived disconnect between classroom and online design. Comments reflecting social presence revealed perceptions that indicators of open communication, group cohesion and affective/personal dimensions were missing in one or both formats, usually online but occasionally in the classroom. Similarly, students who questioned why their course was considered a hybrid often observed that online presence in particular was no different in their view than for fully face-to-face courses that use an online learning management system for occasional activity. Students expressed resentment for online activity devoid of perceived relevance or presence, such as turning in assignments solely for the perceived purpose of documentation. Finally, sophomore students were almost twice as likely to emphasize instructor authority and expertise, perceiving access to expertise hindered by less classroom time, and perceived lack of presence outside of class.

Perceptions of blending also contained diverse reactions to course design, based upon student characteristics such as speaking English as a second language, returning to school after a lengthy absence, familiarity with and access to technology, and need for more direct instructor/student interaction. In community-based courses, both teaching and social presence included interaction with community partners, and the online portion

of these courses was not perceived to be as relevant as classroom time for group cohesion, open communication and affective/interpersonal learning.

Perceptions of Blending and Presence

The emphasis on connection between formats within the theme, "perceptions of blending" points to some possible reasons for perceptions of class time. Class time was for getting guidance, clarification, and instructors' perspective (teaching presence), personal connection with other students and activities that promoted group cohesion (social presence) and activities that afforded opportunities for exploration and integration (cognitive presence). Although some comments reflected students' perceptions of teaching presence online, the perception that teaching presence in the form of guidance, clarification and direct instruction was disconnected from classroom time was more common.

Given the frequent requests for more interaction, particularly in the classroom, coupled with comments reflecting less perceived teaching presence outside of the classroom, it may be that many courses were designed so that peer interaction was emphasized outside of class, while classroom activities were more instructor-directed. Additionally, students who emphasized the importance of instructor authority and expertise may not have emphasized the importance of other class activities, including those that took place online outside of perceptions of direct instruction/teaching presence.

Presence and Learning: Conclusion

Students associated social, teaching and cognitive presence with learning in three primary ways. The first association with learning was the importance of meaningful interaction with peers; second, the perception of the centrality of class time to learning, and third, perceptions of blending, particularly the connection between classroom and online learning. Some responses revealed aspects of students' backgrounds and identities that impacted their experiences with presence and learning in hybrid courses; for example, the impact on social and teaching presence for students who have less access to technology, or the impact of extensive online communicative requirements for students whose first language is not English. Although students' observations revealed aspects of presence that both facilitated and impeded learning, many questions remain. For example, in hybrid settings, what encourages interaction that students perceive as meaningful or authentic? Why are online and face-to-face components of some courses perceived by students to be more integrated, while others are perceived as disconnected? In the following section, findings related to pedagogical practices reveal further aspects of the facilitation of presence that may impact students' experiences of learning.

Pedagogical Practices Associated with Presence

The third phase of analysis was guided by the research question, what pedagogical practices are associated with indicators of social, teaching and cognitive presence in students' perceptions of learning? As explained in chapter three, only teaching actions and behaviors explicitly mentioned by students were coded as

pedagogical practices (for example, "instructor uses class time to help groups prepare to work comfortably online"), rather than statements focused on students' experiences resulting from possible pedagogical strategies (for example, "our groups are comfortable with each other online"). The investigation of pedagogical practices proceeded in two stages. First, as discussed in chapter three, previously identified indicators of social, teaching, and cognitive presence were examined for statements indicating pedagogical practices using a pedagogical roles framework adapted from Kaleta, Skibba and Joosten (2007). This framework is located in Appendix D. Presence statements indicating pedagogical practices were categorized within four roles: pedagogical, social, managerial and technological roles. Second, all data statements reflecting pedagogical practices were thematically analyzed, resulting in seven themes. The following table presents the pedagogical practice themes, organized under the type of presence and pedagogical role(s) associated with each theme:

Table 11

Pedagogical Practices Associated with Presence

<u>Pedagogical Practices</u>	<u>Roles</u>			
	Pedagogical	Social	Managerial	Technological
Social Presence				
1. Facilitation of Interaction	X	X	X	
2. Less is More for Interaction		X		
Teaching Presence				
3. Feedback and guidance	X	X	X	X
4. Organization of Class Time		X		
5. Online Organization	X	X	X	X
Cognitive Presence				
6. Direct Instruction (Not Too Much)	X	X		
7. Design for Integration	X	X	X	X

Some pedagogical practices were associated with actions connected to one or two roles, whereas others were connected with actions representing all four roles. For example, pedagogical practices associated with online organization were connected by students to actions reflecting all four roles, both in terms of what was helping them to learn and what was hindering learning. It appeared that from students' perspectives, this pedagogical practice involves the wearing of numerous hybrid course "hats," as does feedback and guidance. The implications for these differences will be discussed in relation to the pedagogical themes that emerged from the data.

Pedagogical Practices Associated with Social Presence

Pedagogical Practice One: Facilitation of Interaction.

Indicators of teaching and social presence often occurred together in the context of pedagogical practices associated with open communication and group cohesion, reflecting both pedagogical and social roles, and can be summed within the theme, "facilitation of interaction." Instructors facilitated engagement in dialogue, and thus perceptions of social presence when they actively encouraged discussion in both formats, emphasized connections between discourse in both formats, and provided guidance for interaction, as in the following examples:

Professor sums up [online] group discussions and previews the class & this makes us comfortable to express our views in class.

Instructor actively encourages discussion online as well as in class, so it is easier to get to know the people we are in class with.

Letting us continue what we thought was the best part of online discussion, when we meet [is helpful] ... encourages better discussion in class, because we see what others think about issues before we meet.

Changes to facilitation.

There were three primary pedagogical actions connected to changes in facilitation of discourse that would improve learning: instructor feedback on online interactions, use of interaction during class time, and providing activities in class that would form a basis for open communication and group cohesion online. These practices implied social and managerial roles, in addition to pedagogical. For example:

Discussion boards need more attention from professor. We are confused by the messages that don't pertain to our group and some people get confrontational.

[We suggest] Specific directions for posts so they actually provoke real discussion.

[More] In class discussions, which are more personal to get to know each other. We wish we had more class time to discuss rather than just online.

[It would help] If we felt more comfortable to discuss in class, more interaction with other students the best way which would improve discussion on D2L.

More help in class and structure for groups, we are lost in cyberspace.

Pedagogical Practice Two: "Less is More" for Interaction

The "class and a half" syndrome has been discussed at length in the literature (Bonk & Graham, 2006; Caulfield, 2011; Picciano & Dzuiban, 2007), and refers to the practice of underestimating hybrid workload requirements (particularly in online activities), thus creating the perception among students of a significantly increased workload, often seen as irrelevant or "busy work." Data from eighteen courses in this study contained comments connected to the "class and a half" syndrome. A surprising finding about these comments was that many were connected to social presence, and the "class and a half" as a pedagogical practice that diminished perceptions of presence:

Online [is] a long weekly to do list of busy work, we are doing a lot of extra work for this class compared to other classes but not really benefiting by added isolation from classmates and professor.

[We would like] More emphasis on discussions. The other [online] activities due each week take huge time commitments, nonessential busy work ... not enough time for quality responses to peers.

Discussion/participation online is overshadowed by the immense number of activities there - tests, group work, reading reactions, research reports, etc. [It's] Completely overwhelming!

The work outside of class is enormous and we can't get our group to function properly ...we're exhausted.

Lectures [are] on high speed, to cover what used to be in two classes. There is no time for interaction between students.

Pedagogical Practices and Social Presence: Summary

Across courses, facilitation of interaction was commonly associated with social presence, reflected in the following actions: consistent encouragement and use of discussion in both formats, activities that connected students' discourse in both formats, and providing guidance for interaction in discussion and project groups. Changes that would improve learning were instructor feedback on online interactions, increasing peer interaction during class time, and providing activities in class that would form a basis for open communication and group cohesion online. When suggesting practices connected to changes, pedagogical actions reflecting social and managerial roles were mentioned, particularly actions that would build a climate of cohesion and trust, and clarify expectations for interaction. Finally, many focus groups connected the perceived increased workload in hybrid courses with decreased time and energy for interaction and peer presence.

Pedagogical Practices Associated with Teaching Presence

Pedagogical Practice Three: Feedback and Guidance.

There are few pedagogical actions in the design, facilitation and direction of hybrid courses that impact students more directly than feedback from instructors

(Garrison & Vaughan, 2008). Students in this study often revealed their initial concerns about accessibility to their instructor's feedback, as illustrated by the following:

... although we were worried at first about not enough input from prof, she is very available throughout the week for D2L questions, so that part is working OK

Timely feedback is also a central aspect of both pedagogical and social roles in hybrid courses (Kaleta, Skibba & Joosten, 2007). Observations about feedback and clarification connected to teaching presence reflected students' appreciation of or desire for timeliness, consistency (in and outside of the classroom), and accessibility:

Regular comments from instructor online [are] timely and helpful.

Professor's feedback in class AND throughout the week [is helpful].

Instructor offers regular feedback in both venues that questions and reframes the decisions made by the different groups ...

There were also numerous comments across the data reflecting students' perceptions of a lack of feedback, and thus teaching presence, online. Occasionally, lack of instructor presence online was attributed to problems with, or lack of instructor familiarity with technology.

During class we can clarify our confusions, online we wait and wait for answers - not beneficial (stress).

Assignment expectations are hard to clarify online – we don't get an answer until the day before something is due, and we have been waiting and waiting to do it!

Hard to wait to get answers to questions ... this stalls work and create stress re. deadlines ... instructor should use chat.

Maybe professor could check in online occasionally to give us some feedback on how we are progressing.

Feedback is supposed to happen online but [we] haven't received it due to technology problems.

The comments above reveal the extent to which students connected online feedback practices to perceptions of teaching presence, particularly direct instruction. Indicators of teaching presence, including direct instruction, were also connected to the second pedagogical practice theme: use of class time.

Pedagogical Practice Four: Organization of Class Time

Class time for feedback and clarification.

The most common observation about the use of class time was the practice of spending significant time providing feedback and clarification. Comments about feedback and clarification reflected actions associated with pedagogical and managerial roles, and were most often found within teaching presence indicators, while a few comments were connected with cognitive presence. Observations from students about the design and organization of class time are not unique to hybrid courses, and the same is true of observations about timely feedback and clarification of expectations. However, just as students considered classroom time to be central to their learning, so did the classroom appear, from students' perspectives, central for clarification about course expectations:

Structured class time helps to have direct contact with instructor and clarify questions and problems.

We can still occasionally clarify confusing points with the instructor, in real time.

Online, catch up with what we missed. In class, we get to clarify directly any questions we have.

Having class time for questions [is helpful] so we can clarify what we are confused about.

More instructor.

As much as students appreciated the use of class time for clarification and valued peer interaction, they also expressed a desire for "more instructor" *during* class time, which was often equated with lecture, instructor's input on course material, and occasionally, even more clarification than was already the case:

More structure and direction given in class. Meeting once a week isn't enough for everything she is trying to get done.

We need more details on assignments, the "between the lines" details that usually get clarified bit by bit in face to face classes ... Maybe clarify the details on video and post to D2L?

We spend huge amounts of time trying to find what is needed to complete our work online. We would rather spend more time in class and clarify things.

We need more direction from instructor. Face to face, more perspective on book, because we can't get all of it ourselves, and online, more guidance on our progress.

Class times with [professor] are the best but they are always cut short [by the need to clarify the course]. We want to hear more from her due to her style and amazing knowledge of the subject. [Professor] shouldn't be replaced by D2L, Detriment to Learning.

Preparation for online work.

The final subtheme within the pedagogical practice, "organization of class time" is the deliberate preparation of students for work online. Although this preparation involved clarifying expectations, it also frequently involved deliberate activities to prepare for working independently.

[We] Like that we are able to preview the upcoming week before we leave class, and anticipate any challenges that could stall our [*community partner*] work.

(It helps that) some lecture time is tied into upcoming online work required before the next class.

"Bridge" activity during class is [a] good preview of what is required once class is done.

When deliberate preparation for online work did not happen in class, it was frequently requested by students, and these requests included pedagogical practices reflecting pedagogical and managerial roles:

Make sure we understand assignments before we go off on our own.

In class: more deadlines, guidance, structure for group discussions online.

Professor could help by providing expectations for online group work more, during class

More class time – we always run out before we get ... preparation for work online. [It would help if] Lectures [were] more interactive and more connected with stuff online.

[We] need more directions for online work but it seems like we have had choose between that and more interactive lectures (less interaction, more directions).

The final theme that emerged connected to pedagogical practices and teaching presence was the organization of the online setting.

Pedagogical Practice Five: Online Organization

The approach taken to organizing the online portion of hybrid courses and strategies for presenting material online was often associated with teaching presence or lack of presence, regardless of how often students reported instructors were actually online. Online organization facilitated presence in the following ways: sequencing of

activities and assignments, providing resources, and personalizing online activities, and as such, required pedagogical activities spanning technical, pedagogical, managerial and social roles. Students commented on the presence of their instructors in the context of how the structure of online work guided them through processes:

We appreciate the organization and friendliness of the D2L class outline, that takes us through the [course] requirements each week as the instructor intends.

Even though we attend class so seldom, we stay on track with professor's expectations because of [the] guidelines, directions and resources online.

Checklists rock - online version of 'don't forget this!'

Professor's guidance online [is helpful]. We like the FAQ [frequently asked questions] with the links on where to go/what to do if [we are] stuck.

Providing resources online, such as online lecture videos, powerpoints, research strategies, web links, and strategically placed materials to extend class concepts were also framed by students as online presence:

Having lectures captured and put online is like having the professor available in a very flexible way.

Professor continually helps with learning. [Online] We have access online to many examples he has provided as well as powerpoint slides, and good tutorials if needed.

A final way that presence was conveyed to students through the organization of the online setting were the ways that instructors personalized the D2L course materials. Although these practices were by far the least commonly mentioned within this theme, they were noted frequently within individual classes, when they occurred. The following

examples are reflective of how often the term "personal" was found within comments of this type:

Online, [the] instructor has different images and symbols on the [front] page each time that they convey the week's theme, and usually [an] interesting link to a current event. Personal, and less dry than usual D2L.

Carefully sequenced modules and use of technology online, narrated powerpoints with humor, personalize the online as well as class.

Little videos of instructor "tips" are helpful and fun! More personal way to provide guidance through the rough parts of the course.

Pedagogical Practices and Teaching Presence: Summary

Students in this study observed the following pedagogical practices associated with teaching presence: regular and consistent feedback, class time that included clarification, interaction, professor perspective and guidance, and preparation for online activities. Students also mentioned the organization of the online setting that provided "presence" through guidelines, expectations, strategically placed resources, and technology-enhanced strategies that personalized online resources. Although the pedagogical practices associated with teaching presence reflected all of Kaleta, Skibba and Joosten's (2007) hybrid pedagogical roles framework, the comments under the pedagogical theme "organization of the online setting" consistently reflected multiple aspects of pedagogical, social, managerial, and technological roles.

Pedagogical Practices Associated with Cognitive Presence

Pedagogical Practice Six: Direct Instruction, But Not Too Much

As discussed in chapter three, perceptions of both teaching and social presence have been found to predict perceptions of cognitive presence. Therefore, it is not surprising that pedagogical practices associated with teaching and social presence were also associated with cognitive presence; for example, “The [instructor’s] discussion questions online (teaching presence) are probably the most helpful in challenging us to collectively explore (social/cognitive presence) what we’ve read.”

However, not all pedagogical practices associated with teaching and social presence were associated with cognitive presence in the same degree. Within the pedagogical practice of facilitating discussion, an emphasis on the facilitation, design and/or monitoring of online discussion most often emerged as important to students' perceptions of cognitive presence. Students' observations often implied a balance between some guidance that promoted exploration and integration of course ideas, but not too much guidance, which hindered those processes:

In groups we are required to explore solutions to [activity] dilemmas on our own, but instructor's "lurking" (in a good way) online is helping to give us pointers when we are stuck.

In addition to students' [online] comments there are some from our instructor, which promote further discussion and perspective ... but not too much to stifle self-exploration.

[We need] More help with peer feedback- online people are afraid of being critical so it's not helpful ... most comments [are] something like good job!

More specific directions for posts so that they are more informative and can promote greater exploration of topics.

Guidance for online posts is not specific enough, so we don't know what to write about (other than "the article.").

First teacher any of us ever had who participates in discussions online ... provides motivation for critical reflection.

As can be seen from these examples, when a change to facilitation was needed, it was more often connected to a perception of too little facilitation of exploration online, rather than the opposite. Practices associated with social, as well as pedagogical roles were dominant, as students commented on guidance and feedback for clarifying and creating a more comfortable climate where peer feedback online could be more constructively critical.

Pedagogical Practice Seven: Professor as Weaver and Interpreter

Design for integration.

Earlier in this chapter, the theme "perceptions of blending" included perceptions of connection, or lack of connection between face-to-face and online formats. Occasionally these observations contained specific examples of pedagogical practices, sometimes metaphorically describing how some instructors facilitated integration between face-to-face and online learning:

Professor teaches us how to weave all the different parts of the course together for a holistic, more integrated learning.

Instructor's weekly interpretation of the chaos online [is] enlightening!

As previously discussed, observations of a strongly perceived connection between formats were associated with social, teaching and cognitive presence. Likewise, when statements observing connection explicitly mentioned pedagogical practices, they also occasionally included indicators of cognitive presence. Pedagogical practices reflected pedagogical, social, managerial and technological roles, and included assignments, activities, and use of class time intentionally devoted to connecting online and classroom so that they enhanced exploration and occasionally, integration:

D2L assignments purpose is push our thinking forward and prepare us to get together in class where we synthesize it all.

Assignments completed after lecture that allow us to actively apply material and check [our] understanding.

Pre-session assignments are great for making the most of class time - explore alternatives with others and then using info. generated to solve problems in class.

In contrast, when pedagogical practices were perceived to duplicate, or create a lack of connection between online and classroom learning, indicators of cognitive presence were either absent, or were mentioned as part of changes to improve learning:

We need less lecture because we have already gone over most of the material online. He could find out the areas we are really having trouble with and base the lecture on that.

[It would help to have] More focused class time that builds off online and lets us go further in exploring the [*course topic areas*].

Assign online work for basic information, then focus class time toward higher level information and interactive focus (applied work?)

Pedagogical Practices and Cognitive Presence: Summary

The two most commonly mentioned pedagogical practices associated with cognitive presence were facilitation of discourse, and course design and organization for integration. Students observed specific practices within facilitation of discourse, such as providing guidelines for interaction that would direct students' interaction and inquiry, without constraining inquiry too much. Generally, course data indicated students' perceptions that more directed facilitation was needed for further exploration and integration of course concepts. The second pedagogical practice associated with cognitive presence was course design and organization for purpose of integration between face-to-face and online learning activities. In these cases, metaphors associated with connection, such as "weaving" were evoked as students described experiences associated with triggering, exploration and occasionally, integration. On the other hand, indicators of cognitive presence were missing when students' online and face-to-face experiences were perceived as duplicating one another, or disconnected.

Presence and Pedagogical Implications: Summary

This chapter began by summarizing the results of an analysis that coded indicators of social, teaching and cognitive presence in midquarter assessment data focused on students' perceptions of learning in hybrid courses. Students regularly connected their perceptions of learning in hybrid settings with indicators of social, teaching and cognitive presence. The data contained more statements reflecting teaching presence categories than was expected. When presence indicators were separated by grade level, sophomore

student data contained significantly more indicators of teaching presence, compared to their numbers in the total student sample. Junior and senior level student data contained more indicators of cognitive presence, in comparison to the sophomore students.

The Relationship Between Teaching Presence and Social Presence

An interesting juxtaposition emerged between the large numbers of teaching presence indicators within suggestions for change (particularly in the areas of design and organization and direct instruction), compared to the smaller numbers of social presence indicators overall. Within the social presence data, indicators connected to "open communication" were three times more frequent than "group cohesion" and nearly four times more frequent than "affective/interpersonal" indicators. Comments connected to "open communication" were primarily associated with students' perceptions of peer interaction and its relationship to learning. Frequent requests for "more interaction" were found within suggestions that would help learning. Indicators of group cohesion, such as sustained collaboration, and intergroup communication, were less common, as were the affective/personal dimensions of social presence. Why might this be, given the emphasis placed by students on peer interaction?

The thematic analysis of pedagogical practices associated with presence provided some insight into how students were connecting peer interaction and teaching presence categories in the context of learning. Fewer indicators in the areas of group cohesion and affective dimensions may be connected students observations about facilitation of interaction, which emerged as a pedagogical subtheme connected to social presence. Included in the data were numerous requests for more facilitation of interaction,

particularly in the online setting. It may be that indicators of group cohesion and perceptions of community may have been fewer for some courses when students perceived, as one group expressed, that they were “lost in cyberspace.”

Presence and Integration

Another significant pedagogical facilitator of peer interaction was evident in the number of social presence indicators connected with the practice of deliberately integrating online and face-to-face formats. Some courses were perceived as integrated by students, while in other courses, the two formats were perceived as disconnected, with the concurrent perception that group cohesion and affective/interpersonal dimensions were missing in one or both formats, usually online but occasionally in the classroom as well. It is possible that many students did not comment at all on these presence dimensions, if they were indeed missing from their learning experience in the class, thus resulting in fewer group cohesion and affective/interpersonal comments.

Perceptions of Teaching Presence in Both Formats

Other challenges to social presence may have been the perception of less teaching presence online, and the significant amount of time spent providing feedback and clarification in class. Although students appreciated having class time for “direct” clarification, they also observed that this activity left less time for peer interaction. For example, some comments that contained indicators of both “facilitation of discourse” and “group cohesion” suggested a possible connection between suggestions for more peer interaction and less indicators of group cohesion:

We want more time to get to know other students in class ... posts are informative but they can't substitute for the real time connections in class with others.

Some students may have been more focused on the role of the instructor in a partially online course. Sophomores in particular were more likely to focus on direct instruction in the form of teacher expertise and authority, which may have impacted their perceptions of the connection between group cohesion indicators and learning. Finally, extended collaborative activities were not often mentioned by students, and many students wished for more peer interaction in the classroom setting. It is possible that less indicators of presence could reflect less emphasis pedagogically on activities requiring extended collaboration, and more emphasis on peer interaction, particularly online.

Peer Interaction and Inquiry

The appreciation that students expressed for peer interaction cannot be overstated based upon the indicators in the data. Overall, students were comfortable conversing in class and online, although many students also requested pedagogical actions, including additional facilitation from instructors. When students included reasons for these requests, the reasons often contained indicators connected to social presence (needing assistance when interaction was not open, or comfortable), teaching presence (wanting feedback on their discussion efforts), and cognitive presence. Comments such as the following illustrate students' perceptions that too little facilitation hindered exploration:

More specific directions for posts so that they are more informative and can promote greater exploration of topics.

As discussed previously, there were very few cognitive presence indicators of integration and resolution. When students requested that peer discourse be more “meaningful” or “authentic,” their requests occasionally reflected cognitive presence indicators. In addition to possible reasons suggested earlier for the absence of these cognitive presence categories, analysis of pedagogical practices provided further insight into this gap.

First, a number of observations about the use of classroom time contained references to activities such as lecture, clarification and feedback that competed with social presence (peer interaction) and cognitive presence (activities focused on integration or resolution). In addition, when students noted strong connections between both course formats, these comments contained indicators of all three presences, whereas comments about lack of connection between formats that were perceived to impede learning were primarily found in connection with teaching and social presence, with very few connections to indicators of cognitive presence. When cognitive presence indicators were connected to observations about peer interaction, they were primarily in the category of exploration. As noted above, less emphasis pedagogically on activities requiring extended collaboration, and more emphasis on peer interaction, particularly online, could be connected to less social presence indicators. It could also be associated with less cognitive presence, outside of exploration.

Presence and Pedagogical Roles

A final observation that serves to summarize and connect presence and pedagogical themes is the number of roles, or pedagogical "hats" associated with

pedagogical practice themes that emerged from students' observations. Practices connected to feedback and guidance, organization of online learning, and facilitation for integration were regularly associated with pedagogical, social, managerial and technological roles, perhaps reflecting the complex nature of these actions in hybrid settings. Practices associated with facilitating interaction were associated routinely with pedagogical, social and managerial roles. It is important to note that many of the comments reflecting instructors' social roles were suggested changes to improve learning: observations that noted either the absence of, or the need for pedagogical practices associated with instructors' social roles, and by extension, social presence. This finding also corresponds to the number of changes requested in the teaching presence areas of course design and facilitation of discourse, which simultaneously reflected social presence concerns for group cohesion and peer interaction.

Integrating Students' Perspectives on Learning and Presence

In the previous sections, themes that emerged from indicators of presence found in students' perceptions of learning were presented, as well as pedagogical practices associated with presence. Several questions arise when considering the confluence between presence and pedagogical themes. For example, why were indicators of cohesion so few, relative to the emphasis students placed on peer interaction as important to learning? What contributed to perceptions of teaching presence in some cases, and less so in others, even when indicators of directed facilitation were equally present?

Besides pedagogical practices associated with directed facilitation, what else might account for the uneven nature of cognitive presence across courses?

This section presents a framework placing these and similar questions into the larger context of integration and inquiry. A meta-analysis of course themes reflecting integration and inquiry will be presented. Courses reflecting an environment characterized as “integrated/inquiry” were found to reflect a more holistic integration of all presences, and more indicators of all elements in the practical inquiry cycle.

Overlapping Meta-Themes: Integration and Inquiry

Across course presence and pedagogical themes, two central patterns were consistently connected to students' perceptions of learning: observations about peer interaction and inquiry, and observations about integration between various learning experiences inside and out of the classroom. Hybrid learning experiences in this study can be conceptualized as a confluence of these two central themes.

Inquiry vs. Transmission

The “transmission” dimension refers to courses in which students described learning as acquired through transmission via delivery of predetermined content (Sfard, 1998). Peer interaction was perceived as supporting knowledge acquisition, focused heavily on progressive individual attainment of knowledge within the contexts of learner-content and learner-teacher interaction, rather than learner-learner interaction (Vrasidas, 2000). The inquiry dimension refers to course settings in which inquiry was observed by students as central to process of learning. Learner-learner interactions were perceived by

students as important for creating meaningful interpretations, shared understandings, and in some courses, were perceived as central to developing knowledge construction skills.

Although various dimensions and learning activities in any individual course might be considered more inquiry or transmission focused, in the context of presence, students' observations were remarkably consistent with regard to how integral the processes of inquiry or transmission were perceived as central to learning in their courses. Students were also consistent across courses with respect to another central theme connected to presence: integration.

Integrated vs. Nonintegrated

Courses categorized as integrated were those in which interaction and learning activities were perceived as consistently and continually connected within and between course formats, often referred to with metaphors such as "spiral," "weaving" and "cycle." Nonintegrated courses were those in which learning activities were perceived as primarily disassociated within and between course formats. As with the inquiry/transmission dimensions, various dimensions of individual courses might be perceived as more or less integrated, and thus be placed on various points on a continuum; however, in the context of presence, focus group findings resulted in consistent perceptions of how integrated overall students considered their course experiences to be.

When combined, these continua result in a categorization of hybrid course orientations in four general groupings:

1. Nonintegrated/Transmission

2. Nonintegrated/Inquiry

3. Integrated/Transmission

4. Integrated/Inquiry

Figure 7 outlines the characteristics of courses within these four categories.

<p>Nonintegrated/Transmission (n=8)</p> <ul style="list-style-type: none"> • Peer interaction and learning activities primarily disassociated within and between course formats. • Learning as acquired via transmission • Peer interaction primarily for knowledge acquisition 	<p>Integrated/Transmission (n=14)</p> <ul style="list-style-type: none"> • Peer interaction and learning activities consistently connected within and between course formats. • Learning as acquired via transmission • Peer interaction primarily for knowledge acquisition
<p>Nonintegrated/Inquiry (n=11)</p> <ul style="list-style-type: none"> • Inquiry and learning activities primarily disassociated within and between course formats. • Learning as construction of meaning via interaction • Inquiry inconsistently observed as central to process of learning. 	<p>Integrated/Inquiry(n=6)</p> <ul style="list-style-type: none"> • Inquiry and learning activities consistently connected within and between course formats. • Learning as construction of meaning via interaction • Inquiry consistently observed as central to process of learning.

Figure 7. Course categories derived from integration and inquiry. The overlapping meta-themes of integration and inquiry resulted in common pedagogical patterns, resulting in the four course categories.

As can be seen in Figure 7, the integrated/transmission category contained the largest number of courses (14), while the integrated/inquiry category contained the least (6). Since the themes within these groupings emerged from perceptions of learning connected to social, teaching and cognitive presence, the pedagogical implications of this course categorization for presence can be illustrated as follows.

Nonintegrated Transmission

The community of inquiry framework is altered here to illustrate pedagogical characteristics within each presence for courses categorized as nonintegrated/transmission. In these courses, students commonly equated teaching presence with classroom activity. Likewise, the classroom was perceived as the format most conducive to personal contact. Overall, limited triggering and exploration indicators were found, and more peer interaction was often mentioned as a change that would improve learning.

Pedagogical practices are illustrated in the overlap between social, teaching and cognitive presence, and together suggest practices reflective of an emphasis on transmission. In the CoI model, the relationship between teaching and social presence is summarized as "setting climate." Pedagogically, only indicators connected to "sharing

personal meaning" were occasionally mentioned as a helpful practice during class time, and usually referred to the additional perspective provided by the professor during class lectures or discussions. Although some courses included limited opportunities for peer interaction and collaboration, pedagogical practices connected to setting climate and other pedagogical facilitators of social presence were not, from students' perspectives, a focus of course design. The pedagogical relationship between social and cognitive presence, termed "supporting discourse" in the CoI model, primarily consisted of the opportunity for peer-to-peer clarification of online (primarily independent) activity. When this discourse was encouraged by instructors, the perceived goal was to promote better individual understanding of content, as in the following focus group observation: "[It is] helpful to ask questions online because fellow students can explain things in a way you can get it." Finally, the relationship between teaching and cognitive presence, or "selecting content" was primarily observed by students as instructor-directed discourse, usually in the classroom, and assigned independent study online. Although some feedback was provided to students online, the primarily setting for focusing and task and providing clarification was the classroom.

These courses are also categorized as "nonintegrated," because with the exception of opportunities to ask questions and clarify misunderstandings, discourse activities connected to learning were generally perceived as disassociated across formats. Social presence was primarily viewed in connection to classroom discourse. From students' perspectives, instructors were mostly unaware of online peer clarification activity, and this activity was not connected to class lecture or discussion. Although online student

activity might follow from a course lecture (such as viewing an online lecture, taking a quiz, comprehension module or applied activity), the process and outcomes of these activities were not perceived to impact future class meetings. In some cases, students perceived no connection between classroom and online activities.

Nonintegrated/Inquiry

The process of inquiry is considered a fundamental facilitator of social, teaching and cognitive presence in the community of inquiry model (Garrison & Vaughan, 2008). However, in this study, students' perceptions of the value of inquiry and presence varied most widely in courses categorized as nonintegrated/inquiry, as illustrated in Figure 9:

Data from courses in this category contained numerous teaching and social presence indicators of facilitation of discourse and peer-peer exploration. Peer inquiry was perceived as a deliberate, valued aspect of course design and activity; however, it was not perceived as consistently integrated with other learning activities within and between course formats. This disconnect was observed by students in the following ways: (a) inquiry activities that were not, from students' perspectives, meaningfully assessed, (b) inquiry that did not contribute to other activities or assignments, (c) inquiry in one, but not both formats, and (d) inquiry processes in both formats that were perceived as disassociated.

Although many instructors provided feedback and guidance online, teaching presence in these courses was most often associated with direct facilitation of discourse in class. Pedagogical practices associated with social presence were the facilitation of inquiry in class, providing opportunities for collaborative work, and occasionally, deliberately promoting an environment in which students felt comfortable participating in interaction. Indicators of teaching and social presence associated with "setting climate" were primarily associated with one format, usually the classroom. Although it was rare for instructors to participate in students' online discussions, some provided online discussion questions or guidelines which assisted in promoting more effective communication (social presence) and exploration (cognitive presence). At the same time, most students preferred the classroom for personal contact with students and instructors and group collaborative activities.

Students in nonintegrated/inquiry courses often requested more interaction in the format perceived as missing peer inquiry, more class time for personal contact and instructor perspective, more involvement from professors in online inquiry, more classroom preparation for online collaboration, and more incorporation of online inquiry into the classroom agenda and format. Although some students enjoyed participating in peer discussions online, in other courses, online discussions became "something just to check off," perceived as irrelevant or lacking direction. The overlap between teaching and cognitive presence, "setting content" was more of a shared activity with students than in transmission-oriented courses (for example, online activities requiring students to generate additional course-related content), yet the perceived disconnect between perspectives generated by peer inquiry and other dimensions of course experience and content were observed as barriers to cohesion, motivation, and progression past the exploration stage.

Integrated/Transmission

The third group of courses was perceived to be highly integrated, but peer inquiry was not perceived by students to be central to course design. These courses can be categorized as integrated/transmission.

Teaching presence indicators for students in integrated/transmission settings were consistently perceived both in the classroom and online. In class, students indicated instructor perspective, clarification and direct instruction as helpful to learning, while online, the organization of activities was often associated with "teaching presence," as in the following comment: "Very clear instructions and good roadmap for learning online, and navigating both parts of the course ... as instructor intends." Another way that integration was connected to teaching presence in both formats was the frequent observation that deliberate time was devoted in class to preparing students for online activities, as well as instructor-directed debriefing of previous online activities. Instructor presence online was equated with an awareness of challenges and questions that arose when completing online tutorials and modules, and a willingness to use that

knowledge to modify planned classroom formats. Thus classroom and online learning experiences were observed to consistently build on one another, continually directed by instructors' interpretations and awareness of progress in both formats.

Like nonintegrated/transmission settings, the integrated/transmission classrooms were generally preferred for personal contact and facilitating social presence.

Interestingly, students in integrated/transmission classes were just as likely to mention social presence indicators connected to open communication as were students in both groups of inquiry-focused classes. Indicators of exploration were fewer than in inquiry focused courses, but some indicators of integration and resolution were present.

Cognitive Presence in Integrated/Transmission Settings.

It is not surprising that transmission-focused courses had fewer exploration indicators overall than inquiry-focused courses, given the focus on peer interaction in the latter settings. However, indicators of integration and resolution, although limited, were occasionally present in integrated/transmission courses. This is notable, given that these cognitive presence categories are associated with both collaborative exploration and strong perceptions of social presence (Garrison, 2007). In some courses, perhaps the instructors' consistent presence in the form of deliberate facilitation of connections between learning experiences in both formats resulted in the projection of students' "presence" socially, emotionally, and cognitively, "voiced" through the instructors' continual articulation and integration of students' progress and challenges.

Integrated/Inquiry

The final category resulting from students' observations about integration and peer interaction was Integrated/Inquiry. In these courses, inquiry was perceived as central to the process of learning, and was also perceived as meaningfully integrated within and between course formats. The relationship between these observations and social, teaching and cognitive presence is illustrated in Figure 11:

These classes followed the general pattern for all courses in that class time was preferred for questions and clarification, but facilitation of discourse in both formats was mentioned more consistently in relation to teaching presence, even though instructors were no more likely to "be online" from students' perspectives than courses in any other

group. This pattern may be associated with the number of observed pedagogical actions reinforcing the development of community, primarily by deliberately integrating classroom and online inquiry. Pedagogical practices mediating social and cognitive presence included participating in inquiry, usually providing strategic guidance (for example, " 'lurking' until needed.") From students' comments, some instructors appeared to be active participants online, while others were not, but all were perceived as consistently "aware" of social and cognitive processes. Although social presence indicators of open communication were no more common in these courses than for "nonintegrated/inquiry" courses, indicators of group cohesion and affective/personal were much more commonly found: 46% of all group cohesion and affective personal indicators observed as "helping learning" were found in this small group of six courses. Finally, although indicators of integration and resolution were by far least commonly mentioned in courses overall, courses in the integrated /inquiry group were more likely to contain indicators of all four components of the practical inquiry cycle, including 32% of integration and resolution indicators observed as helpful to learning.

Integration in Inquiry and Transmission-focused Hybrids.

Much like the integrated/transmission group, students in the integrated/inquiry group reported that instructors deliberately facilitated a connection between online and classroom activity. However, there were three differences within integrated/inquiry formats. First, students often indicated that they were involved in the identification of connections between formats, and the implications for course modification. Second, in addition to integrating cognitive work in both formats, students mentioned facilitated

activities that connected and promoted cohesion and effective intergroup communication in both course formats. Third, in comparison to the integrated/transmission group in which the integration between classroom and online learning often had discreet beginnings and endings ("Instructor outlines module for us in class, instructs on how to do the work online, finishes by getting questions in the next class. Then we go to the next"), students in integrated/inquiry occasionally expressed perceptions of ongoing cycles of inquiry ("She helps us connect what we did online to what happens in class, and vice versa, so it's like a cycle that helps us keep building on what we know.")

Setting Climate in the Context of Integrated/Inquiry.

Observed pedagogical practices mediating teaching and social presence, or "setting climate," included use of classroom time to create connections and trust among students, facilitating awareness and practice of skills needed for similar cohesive activity online, and establishing shared responsibility for inquiry. Notably, "teaching" presence activities such as facilitation of discourse and directed facilitation was observed by some groups as a joint responsibility, with activities including structured peer feedback, co-construction of expectations for participation and learning goals, facilitation of focus on task, and facilitation of dialogue. When students participated in "setting content" by investigating resources online, these resources were often integrated into class discussions, activities and assignments. Additionally, "content" not only included student-discovered materials, but also included students' and professor's interpretations of materials.

Integrated/Inquiry: Conclusion

Courses characterized by a focus on integrated/inquiry reflected the most similarity with Dewey's (1938) conception of inquiry, which also informs the community of inquiry framework: inquiry as open-ended and inherently social, beginning with a problematic situation (i.e., "triggering") which is collectively explored through numerous cycles to resolution. The following chapter presents a discussion of the implications of integration and inquiry for teaching, social and cognitive presence.

Chapter Five

Discussion

Integration and Inquiry: Implications for Presence

Shea, Li & Pickett (2006) found that students perceived a significant connection between teaching presence (particularly design and organization and facilitation of discourse) and the perception of belonging to a learning community. However, in their research, students in fully online courses reported similar or higher perceptions of learning and community than did students in blended/web enhanced courses. The authors suggested that the relationship between the online and classroom activities needed further investigation. The framework presented in the previous chapter provides some insight from students' perspectives about the nature of these relationships, discussed below.

First, the integrated/inquiry analysis illustrates several subtle and complex aspects of facilitation and discourse not well researched in the CoI literature. Research literature has established that facilitating conditions such as drawing in participants, creating a positive learning climate, and diagnosing student misperceptions have been found to increase perceptions of teaching presence and community (Shea, Li & Pickett, 2006), and have been suggested as the focus of efforts to inform instructors about the importance of these practices to teaching presence, and thus social presence among students (Swan & Shih, 2005).

However, findings in the present study also suggest that deliberate integration of all course elements, both face-to-face and online, with the central goal of promoting inquiry within and among those integrated elements, as important to students' experiences

of hybrid learning. Although these observations involve discreet practices, (for example, online facilitation of discussion), they are broader in their implications, implying that integration for inquiry involves a complex set of interrelated pedagogical practices connected to all course learning activities, processes and behaviors.

Is Integration an Effective Facilitator of Social Presence?

One question that arises from this study is whether or not there is a relationship between effective integration of hybrid course formats and greater perception of social presence regardless of the emphasis on inquiry, based on the pattern found in integrated/transmission environments. Since consistent inquiry was not a central focus for this group of courses, the reasons for similar patterns in open communication are unclear. In integrated/transmission courses, students' comments also contained many indicators of direct instruction and facilitation, (even when instructors were not perceived as "being online" often), due to the number of practices associated with facilitating connections between formats. The following comment is illustrative of these types of observations:

Instructor provides good focused class time and discussion that builds on what we accomplished online.

In this case, students were referring to lecture and some discussion and questions over the lecture. It is clear that students perceive a connection between what transpired online and the impact upon class time. It is also notable that in this case, online activities were not collaborative but individually completed modules, but are nevertheless framed as "what we accomplished." When considering the results of survey studies using the

community of inquiry instrument, Garrison (2007) has noted the importance of the directed facilitation factor, concluding that it "contributed the most to predicting a sense of community and learning" (p. 67). Considering these findings, it is possible that the high level of integration between both formats facilitated a climate resulting in higher perceptions of connection among students than otherwise might have been the case, even though these course settings did not generally emphasize sustained peer interaction.

Inquiry vs. Peer Interaction: Implications for Presence

Students' observations about learning in this study revealed a distinction between interaction considered to be inquiry-focused, as opposed to interaction for clarification, or reinforcement of knowledge transmission. The importance of peer interaction to online learning has been confirmed in a number of studies (Aragon, 2003; Garrison, 2007; Garrison, Cleveland-Innes, & Fung, 2010; So & Brush, 2006). Although the nature of inquiry-focused peer interaction has not yet been studied extensively in the hybrid literature, both Conrad's (2005) and Edginton and Holbrook's (2010) research in hybrid settings has confirmed the importance of inquiry in both formats, face-to-face for better connections with peers, and online interactions for exposure to a wider range of viewpoints. A small number of case studies have revealed additional findings connected to students' responses in this study: Students valued learning from one another's questions (Snowball & Mostert, 2008), developing a wide range of communication skills, face-to-face and online (Mitchell & Forer, 2010), and the opportunity to balance online learning with direct interaction and inquiry with peers, perceived by some students as

more facilitative of affective dimensions of learning (Parkinson, Greene, Kim & Marioni, 2003).

Peer Interaction, Presence and Learning

Recent research on students' experiences in hybrid settings has also demonstrated students' consistent desire for more peer interaction, particularly in the classroom (Edginton and Holbrook, 2010; Jackson & Helms, 2008). The current study provided a unique glimpse into students' perspectives on interaction connected to learning: interaction online was juxtaposed with a perceived imbalance and gap within the class setting. For example:

Class time should have more student interaction to compliment how we interact online, instead of just powerpoints. We get to be involved online but in here we're just muted.

Students desired "voice" in the classroom to further articulate and build upon what had transpired prior to class, they valued the extension of their online discussions in the presence of and with input from their instructors, and they valued the opportunity to enhance their classroom interaction with meaningful, extended work online. They equated the integration between classroom and online discourse with perceptions of community, collaborative inquiry and deeper levels of learning. In contrast with transmission-focused courses in which "open communication" was the most common social presence category, in other courses the combined dimensions of integration and sustained inquiry appeared to have facilitated various dimensions of social presence holistically, including the development of cohesion and sense of community.

Peer Interaction and Social Presence Findings: The CoI Survey

Study findings also provide some additional perspective to questions raised by a large-scale study validating students' perceptions of the importance of social presence items on the community of inquiry survey instrument (Boston et. al, 2009). Regression analysis of a very large sample of 28,000 students showed that 20.2% of the variance in student persistence was associated with two social presence items, namely item #15 (I was able to form distinct impressions of some course participants) and #16 (Online or web-based communication is an excellent medium for social interaction). While it is the case that students in the present study appreciated the classroom context for direct access to professor and peers, and online discussions for access to more students' perspectives, the opportunity to have some face-to-face contact did not necessarily ensure perceptions of peer presence in either format. The requests for more peer interaction in transmission-oriented courses, and more integrated interaction in nonintegrated courses suggests the importance of these dimensions as mediators of sustained, meaningful perceptions of social presence in hybrid settings.

Peer Interaction and Cohesion: Remaining Questions

If students in the current study valued peer interaction so highly in relation to their learning, questions remain about the fewer numbers of group cohesion and affective/interpersonal indicators, as compared to open communication. As mentioned earlier, patterns in the integrated/inquiry courses might account for some of this gap, since affective and cohesion indicators were more common in this small group of six

courses. However, larger numbers of open communication indicators in the overall sample would suggest the foundation for perceptions of cohesion, both of which are central to the development of communities of inquiry (Garrison & Vaughan, 2008). The nature of observations connected to the presence category “open communication” provides some guidance for interpretation.

Although many students observed feeling comfortable interacting with peers, some students expressed more connection to others in the classroom, while others mentioned barriers to meaningful communication online, such as confrontational messages, discussions that felt "restricted" or too open-ended, and lack of critical discourse in the form of limited feedback, as in the following:

Discussions online not as helpful. People just keep agreeing with each other.

Supportive discourse is associated with building community, but students in this study did not always perceive this type of feedback as helpful to learning, perhaps because it did not challenge them to deepen inquiry (Napier, Dekhane & Smith, 2011), resulting in disengagement from discussion for some students. Anderson (2004) argues that the "absence of social presence leads to an inability to express disagreements, share viewpoints, explore differences, and accept support and confirmation from peers ..." (p. 274). Although open communication and getting to know others appeared central to students' learning experience in hybrid courses, by midquarter some students may have been tired of discourse that they perceived as little more than rudimentary level information exchange.

The relationship between open communication and cohesion.

Research on the *relationship between* the social presence categories of open communication, group cohesion and affective communication in hybrid settings is in its infancy, and so far has produced interesting but conflicting findings. Vaughan (2004) found that as the frequency of open communication decreased over time, group cohesion comments increased. He speculated that after social relationships were established and groups became more focused on purposes and goals, activities related to cohesion would take more central role. On the other hand, Akyol, Garrison, and Ozden (2009) found that group cohesion evolved more quickly in blended, compared to online courses, perhaps due to the ability of students to establish necessary understandings in class in order work more effectively online.

With the exception of the integrated/inquiry course group, students in the current study were not yet consistently observing indicators of group cohesion as helpful to learning. It may have been that at midquarter, group cohesion was still in process, or, as So & Brush (2008) observe, assigning collaborative tasks in a hybrid environment does not mean that students will necessarily work collaboratively. These and other challenges to peer cohesion are often associated with the need for more directed facilitation of discussion by professors (Garrison, 2007; Garrison, Cleveland-Innes, & Fung, 2010; So & Brush, 2008), and it is certainly true that students' comments in this study reflected a wish for more instructor presence online:

Professor needs to check discussion boards. People are becoming rude.

It is also true that pedagogical practices associated with the social role, particularly building community (Berges, 1995), were observed more often in relation to changes that would improve learning. This pattern reflected students' suggested changes to peer interaction that were more than simply a wish for more instructor intervention, but also reflected pedagogical practices associated with the overlap between integration and inquiry.

An example of one such pedagogical practice associated with this overlap was the frequent request (in the nonintegrated/inquiry group) for changes to course structure such that classroom inquiry would connect more cohesively to online work, as this would, as one group expressed it, "Create more camaraderie among students." Conversely, many observations in the integrated/inquiry course group reflected pedagogical emphases on deliberately facilitating social presence, open communication and cohesion:

In this class we are learning how to pull off an extensive group project working together in real time and online. [Our] Professor has been very helpful in providing timely guidance on how to do this.

These observations can be contrasted with So & Brush's (2008) research on social presence, in which the relationship between social presence and overall course satisfaction was positive, but not as statistically significant as similar research in online settings. The authors hypothesized a relationship between this finding and the opportunities assumed to be automatically afforded by the face-to-face environment to develop social presence. However, in light of the present findings within the analysis of integrated/inquiry, it appears that the perception of social presence as influenced by

classroom contact in hybrid settings is more complex, and impacted by many potential factors that warrant further investigation.

Integrated/Inquiry and Cognitive Presence

Finally, the integrated/inquiry analysis also provides some insight into challenges reported in the literature pertaining to cognitive presence, particularly the practical inquiry cycle. Although students believe they learn a lot connected to perceptions of presence within CoI, they also describe their learning in terms corresponding with lower levels of cognitive taxonomies, and are divided about their perceptions of higher level cognitive outcomes (Rourke & Kanuka, 2009). The researchers concluded that "CoI fails as a model for achieving deep and meaningful learning because the procedures for achieving those outcomes do not materialize" (p. 43).

Based on students' perceptions of learning in the current study, this researcher is hesitant to draw the same pessimistic conclusion about the potential for CoI to engender meaningful learning. Although indicators of cognitive presence in this study mirror findings in the literature demonstrating disappointingly lower levels of cognitive presence overall, courses reflecting integrated/inquiry were more likely to include indicators representing all four components of the practical inquiry process than in other course settings. The "procedures for achieving outcomes" must be considered within the larger framework of the relationship between integration and inquiry. Consider the following statements from two separate courses:

There has been In groups a lot of different opinions voiced and these are done online as well as followed up in class, and this helps [us] to keep record and create solutions.

[It would help] if online and class were better connected. Online we bring up issues but they never go anywhere.

These statements raise questions about the efficacy of the practical inquiry cycle in hybrid settings emphasizing integrated inquiry as a peripheral, rather than core element of course development. As illustrated by students' observations throughout this report, even well-designed, well-facilitated discourse does not necessarily result in perceptions of sustained critical discourse within a learning community. Clearly, much more research is needed to understand how practices associated with courses such as those categorized in this study as integrated/inquiry inform cognitive presence in hybrid courses.

Integrated/Inquiry and Hybrid Learning: So What?

Reflecting on the future of hybrid learning in higher education, Garrison and Vaughan (2008) recall that “McLuhan (1964) advised us that all new media are initially used to deliver the content of old media. This is certainly true of online learning, as the applications have been largely designed to make the traditional lecture more accessible” (p. 143). Subsequently, they contend that “blended learning addresses the issue of quality teaching and learning” (p. 153). On the other hand, this study demonstrated that hybrid formats vary widely in terms of students’ perceptions of learning – hybrid courses do not address quality teaching and learning by themselves. Additionally, not only has learning not been extensively studied in hybrid contexts, it has not been the focus of the bulk of

research on the community of inquiry, leaving a wide range of questions about presence and learning still unanswered (Shea et. al, 2010).

Courses characterized by integrated/inquiry in this study were most reflective of the community of inquiry framework, particularly social presence connected to perceptions of community, and indicators of the practical inquiry cycle. However, given the complex nature of pedagogical practices and learning experiences associated with courses most reflective of the community of inquiry framework, and findings associated with students' preferences for transmission-oriented formats in online settings and partially online settings (Arbaugh and Benbunan-Finch, 2006), a reasonable question might be asked: why encourage further research on or promote learning experiences characterized by integrated/inquiry as defined in this study?

The results of this study suggest some preliminary but important findings concerning the relationships between social, teaching and cognitive presence within the community of inquiry model, particularly in terms of how students perceive presence connected to learning. Although more research focused on hybrid learning experiences in the context of CoI is needed, the present results support the contention of CoI researchers that a deeply integrated approach to facilitating social, teaching and cognitive presence with the goal of developing a community of inquiry can potentially impact deeper levels, possibly transformative, learning in hybrid settings. As long as educational leaders remain committed to promoting opportunities for higher education to transform traditional teacher-centered assumptions about learning, and provide students with experiences that prepare them to address the exigencies of 21st century society, then

practices associated with integrated inquiry within the CoI should be a primary focus in hybrid pedagogy and research.

To suggest that hybrid courses be approached with the goals of meaningful integration and inquiry to develop community is not an idea unique to this study; however, "collaboration on a deeper and meaningful level requires a qualitative shift in interaction to focus on the shared purpose of the learning experience" (Garrison & Vaughan, 2008, p. 39). Perceptions of presence in students' perspectives on learning in the current study suggest that a "qualitative shift in interaction" may be the fundamental challenge in the facilitation of effective hybrid learning, rather than the incorporation of technologies or decisions regarding what proportion of classroom and online work constitutes a blend. The remainder of this discussion will outline challenges to the qualitative shift advocated by Garrison & Vaughan (2008) stemming from the result of this study, and conclude with recommendations for individual and institutional professional development.

Challenges to Facilitating CoI:

Insights From Students' Perspectives on Learning

Findings from this study implicitly and explicitly raised questions about the efficacy of conceptualizing and implementing hybrid settings as communities of inquiry. These included the following challenges: (a) instructors' epistemological orientations, (b) differing conceptions of "experience," (c) students' expectations for hybrid learning, (d) student characteristics, (e) equity and access, (f) classroom and discipline contexts,

(g) institutional reward structures, and (h) limitations of the CoI framework.

Epistemological Orientations Toward Teaching and Learning

Palmer (1997) contends that "we teach who we are" (p. 6). One challenge to the implementation of pedagogical practices associated with the community of inquiry is that individual instructors may or may not hold similar assumptions about learning as are implied by the CoI model. Recent monographs focused on interaction in hybrid settings (DeAngelis, 2009; Grandzol & Grandzol, 2010; Precel, Eshet-Alkalai & Albertson, 2009), advocate "the qualitative shift" in thinking about interaction and inquiry espoused by Garrison and Vaughan (2008). It is rarely acknowledged that how individuals interpret these monographs and similar suggestions provided by university professionals is likely influenced by assumptions connected to deep-level teaching beliefs. Even an activity as seemingly straightforward as "discussion post" can reflect a wide variety of approaches to the role of inquiry:

... there are online discussion forums, but they are more for just checking if we understood what we read.

Online the discussions have created a unique learning environment, where we are discovering information ... from articles we and our classmates share.

The first of these examples was taken from a course characterized in this study as nonintegrated/transmission, while the second example was a statement from an integrated/inquiry course. The community of inquiry model and its proposed relationships between presences are intentionally constructivist in nature (Akyol, Ice, Garrison & Mitchell, 2010). If teaching style is conceived as "the operational behavior of the teacher's educational philosophy" (Zinn, 2004, p. 55), then the ways instructors

manifest teaching presence, as well as the ways that social and cognitive presence are conceptualized, organized and facilitated are likely a reflection of recognized and unrecognized epistemological assumptions about teaching and learning (Vrasidas, 2000; Zinn, 2004).

Like the community of inquiry model, it could be argued that courses in the integrated/inquiry group reflect constructivist assumptions about teaching and learning: Students observed many learning experiences and pedagogical practices that could be characterized as collaborative construction of knowledge through sustained interaction with peers. Although individual instructors' epistemological orientations toward learning are beyond the scope of this study, it is reasonable to suggest that inquiry will be deeply and meaningfully integrated into planned learning experiences only to the extent that it is perceived as central to the process of learning, and will reflect a collaborative approach only to the extent one believes that sharing the process of meaning construction can result in significant learning (Fink, 2003; Conti, 2004).

Differing Conceptions of "Learning from Experience"

Differing conceptions of experiential learning is a related challenge to presence in the context of CoI. As Fenwick (2000) notes, “[i]n a time when an understanding of managed experiential learning is ascending as a primary animator of lifelong learning, the need to disrupt and resist reductionist, binary, individualized notions of experiential learning and pose alternative conceptions becomes great” (p. 244). In the context of hybrid learning, what it means to learn from experience leads to a related teaching presence question: directed facilitation of what? The answer could range from individual

reflective activities, to authentic, situation-specific experiences, to collective integration of emergent meaning systems, to engaging in social action that promotes, rather than thwarts social transformation through experiential learning (Fenwick, 2000).

Students' Expectations for Learning

In addition to professors' recognized and unrecognized epistemological assumptions about teaching and learning, students bring their own expectations about learning to hybrid settings. It is tempting to assume that students would naturally prefer the integrated/inquiry hybrid setting. However, in the twenty-eight courses in this study in which a Likert scale for satisfaction was included, integrated/transmission courses were rated highest by students in terms of overall satisfaction. Arbaugh and Benbunan-Finch (2006) similarly found that online students preferred what they termed "objectivist/collaborative" settings over constructivist environments. Objectivist/constructivist settings share a similarity with courses defined as integrated/transmission in that the focus of instruction is primarily the interpretation and transmission of content and structure to students.

Although students at all levels voiced concerns about time with professors and getting "the instructor's perspective" on issues, sophomores were the most vocal about having less time with professors' expertise and authority. Research on hybrid learning has not explored how students at different stages of development related to locus of authority and knowledge construction (e.g., Perry, 1970; Belenky et.al, 1986), respond to hybrid settings. It not difficult to imagine the challenge for individual instructors in relatively isolated classroom settings, attempting to adjust to new social and pedagogical

roles (Berge, 1995) while facilitating discourse in and outside of the classroom, and contending with students who may not always inherently value or embrace the collaborative intellectual work of sustained inquiry.

Student Characteristics

In addition to challenges connected to students' expectations, there are other possible student characteristics that deserve more attention in the hybrid literature.

Dzuiban, Moskal & Futch's (2007) research on student generations found that millennial students reported the least satisfaction with hybrid learning. The authors speculated that millennial students may have a different perspective on how technology is used in courses. Sophomore students in this study, observed by the researcher to be most representative of traditional age (18-23) students, often made comments about technology and interaction, for example:

D2L is not efficient technology for interaction. Google docs, social networking software, other avenues should be explored for communicating like the rest of our lives do!

There are additional orientations toward learning to consider. For example, Anderson and Adams (1992) discuss how students with a "field-dependent" approach are oriented toward the human relational and communicative side of instructors as much as they are toward course content, with more women, African-American, Native-American and Hispanic students falling within this orientation to learning. It is not well known how hybrid settings impact students with different orientations toward learning, but statements from students in this study such as "Two of us learn better when we have direct human interaction" suggest that the nature of social presence may be construed differently

among students, with potential implications for learning and persistence. Knowledge about supporting students with diverse orientations toward learning has not been addressed in the hybrid literature.

Equity and Access in Hybrids

It is not well known how first-generation college students, international students, returning students, students with multiple work and faculty responsibilities, or students from lower socioeconomic backgrounds respond similarly and differently to hybrid settings. Although sustained, critical inquiry in community of peers can certainly benefit all students, these practices necessitate careful planning to avoid discourse patterns and access disparities that replicate unequal power relations in the society-at-large (Brookfield, 2006; Fenwick, 2000). In addition, one point that is often connected to the potential of hybrid environments to democratize learning in classrooms (and in higher education more broadly) is a shift in faculty roles as educators, for example, a shift from information dispenser to facilitator (Dzuiban, Hartman & Moskal, 2007; Kaleta, Skibba & Joosten, 2007). However, there are no hybrid studies or monographs to date that explicitly discuss how faculty can prepare to navigate issues of authority, power and equity that could arise connected to shifting instructor/student relationships and roles in hybrid environments. Finally, although hybrid learning is frequently framed in terms of increased access, there is little discussion of how presence is impacted for students with differential access to technology, and different cultural capital for understanding unspoken norms for learning in hybrids. For example, students in this study who could not afford computers, had computers with less sophisticated technology, or who shared

computer access with multiple others associated these issues with social and teaching presence, providing insight into ways that access may be simultaneously increased *and* impeded, reinforcing the lower status of those with fewer resources.

Classroom and Discipline Contexts

Classroom context and discipline could also impact implementation of the CoI model. In the current economic climate, with larger class sizes on the increase, pedagogical practices appropriate to larger class settings are important to consider. Students in large courses at both sophomore and junior levels had many observations about teaching presence, usually connected to their desire to “see” the professor more often. Nagel and Kotze (2010) observe that social presence in the form of getting to know peers often dominates online environments in large hybrid course settings, with instructors challenged to facilitate the more difficult cognitive engagement. Their study indicated that incorporating more innovative and highly interactive communication technologies resulted in more cognitive engagement, acknowledging that not all campuses may have equal resources to support extensive technology development support.

Initial studies of discipline and subject matter effects (e.g., Arbaugh, Bangert, & Cleveland-Innes, 2010) have found that community of inquiry framework may be more applicable in applied disciplines (Engineering, Nursing, Education) than “pure” disciplines (Natural Sciences, Humanities, Mathematics), possibly due to the tendency of applied fields toward applied, authentic learning tasks. Another setting neglected so far in the hybrid literature is service-learning, defined as “a unique pedagogical approach to

teaching and learning that strategically combines academic concepts, community service and active reflection” (Cress & Donahue et.al, 2011). Although researchers are beginning to explore the congruence between hybrid and service-learning pedagogical values (Dailey-Hebert, Donnelli-Salee, & Dipadova-Stocks, 2008), the present study suggests that research into students’ experiences of learning while integrating classroom, online and community learning contexts is sorely needed.

Institutional Reward Structures for Innovative Hybrid Teaching

Another institutional challenge concerns institutional reward structures for focusing on educational quality. Hybrid initiatives are often framed in terms of the potential to improve learning and the quality of teaching (Shea, 2007). Many student groups in this study spoke to practices connected to presence that were perceived to impact the quality of learning, both in terms of what was helping learning and suggested changes to improve learning. On a programmatic level, however, few discussions of quality address the numerous reports of increased workload from faculty who are attempting to balance the requirements of teaching in online and face-to-face formats (Vaughan, 2007), coupled with the lack of meaningful reward structure for the hard work of developing quality hybrid environments.

Limitations of the CoI Model

A final challenge to implementing a community of inquiry approach to hybrid learning can be expressed in terms of two limitations in the model itself. First, it has been noted that the practical inquiry cycle is a process model rather than a measure of cognitive outcomes, although knowledge-building processes in the CoI have been

favorably compared to cognitive models such as Bloom's taxonomy (Garrison, 2011).

This observation supports the limitation argued here, that the CoI has primarily been considered in connection to cognitive outcomes of learning. Taxonomies of cognitive outcomes, though important to the understanding of adult learning, have been supplemented by models and taxonomies that broaden the scope of learning outcomes to include affective, engagement, process and developmental components in order to reflect learner-centered, more constructivist views on teaching and learning (e.g., Fink, 2003). There may well be dimensions of process and learning in community that are currently not captured within the indicators of social, teaching, and particularly cognitive presence in the community of inquiry questionnaire.

A second potential limitation is the definition of teaching presence, conceived primarily in the research literature in terms of actions initiated by the instructor. If teaching presence is defined as "the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison & Archer, 2001, p. 5), then conceivably these activities could be shared between teachers and students, where appropriate, as recent commentary on constructivist implications for hybrid learning design suggest (Ligorio & Sansone, 2009). As discussed in chapter two, Akyol and Garrison (2011) similarly argue that actions reflective of teaching presence are not necessarily the sole responsibility of the instructor.

This distinction has implications for instructors who would like to facilitate an environment characterized by integrated/inquiry. The research literature has yet to catch

up with the notion of teaching presence as shared by teachers and students. The community of inquiry survey instrument has commonly operationalized teaching presence primarily in terms of actions initiated by teachers; for example, survey items measuring actions connected to teaching presence begin with the words, "the instructor ...".

Additionally, in the community of inquiry literature, there has been little discussion of how "the design, facilitation and direction of cognitive and social processes" is progressively shared among teachers and students, as has been the case in other postsecondary education domains such as service-learning and feminist pedagogies (Stokamer, 2011; Tisdell, 1993).

Recommendations

Perceptions of social, teaching and cognitive presence are clearly important to students' perceptions of learning in hybrid courses. This section presents four recommendations for facilitating presence in the context of integrated inquiry at the course, program and institutional level.

Recommendation One: Attention to Framing

With the exception of the community of inquiry literature, when the concept of teaching presence is included at all in literature and campus discussions of hybrid learning, it is most often conflated with social presence, and/or defined simply in terms of projecting a sense of self into the online environment. This is understandable, given that

the presence construct has historical roots in concepts such as interpersonal intimacy and immediacy (Gunawardena & Zittle, 1997). However, limiting the definition of teaching presence in this way could encourage instructors to spend inordinate amounts of time online, despite cautionary statements that this practice does not need to occur. This is because metaphorical constructions connected to teacher immediacy behaviors are often formed first in the classroom setting, where students have continual and direct access to the instructor for the duration of the class. Scholarship on metaphor (Lakoff & Johnson, 1980) suggests that metaphorical constructions formed in connection to one setting can easily migrate unquestioned into assumptions about other settings (in this case, about online immediacy practices). The researcher has noted several conversations with hybrid instructors in which guilt over "not being online enough" was compared to classroom access, in spite of their perceptions that students were making reasonable progress and reassurances that students probably didn't need their continual direction.

Deliberately framing teaching presence in connection to the design and facilitation of social and cognitive presence is helpful because it focuses attention not only on immediacy but also on learning processes associated with perceptions of presence more broadly; for example, the ways that teaching presence is indirectly experienced by students through the integrated design of online and classroom activities. This could also be more helpful for instructors whose beliefs about learning and teaching are not connected to values underlying immediacy and inquiry approaches to course design, and possibly for whom teaching presence associated with such constructs have very little meaning.

Leaders of hybrid initiatives on college and university campuses can also consider the ways that hybrid learning itself is framed. As discussed in previous chapters, definitions of hybrid learning most often focus on the fusion or blend of two formats, face-to-face and online, accompanied by detailed discussions about how much or what should be included in either format. Hybrid program leaders who promote the potential of hybrid environments to foster engaged learning practices might be more transparent about their goals by framing hybrids in terms of deliberate connections between classroom and online learning with the goal of integrated inquiry, among other possibilities.

Recommendation Two: Use Integrated Inquiry to Encourage Integrated Inquiry

The pedagogical strategies associated with the community of inquiry framework are varied and complex. Students' experiences with learning in this study demonstrate that organizing a hybrid environment for integrated inquiry involves a number of assumptions about epistemological beliefs, as well as pedagogical skills and assessment practices. Even a seemingly straightforward recommendation to use information gathered from students' experiences online to modify an upcoming classroom session can presuppose knowledge and skills not previously developed or applied (or at least not applied in an instructional setting), such as thematic qualitative analysis of discourse, formative assessment practices, deliberate integration of inquiry and academic content, and strategic facilitation of collaborative knowledge construction, to name a few. As a

result, the researcher's model (in progress) is aimed at encouraging systematic dialogue with about the practice of integrated inquiry in hybrid course settings, shown below:

The domains comprising the integrated inquiry model are interrelated; exploration of one component overlaps with all others. Instructor orientation toward inquiry refers to instructors' underlying beliefs about the purpose and role of inquiry in the teaching and learning process. Goals for the inquiry process are also considered, (for example, the development of group cohesion and community) in addition to the products of inquiry.

Larger questions addressed by the course refers to the enduring questions that courses might help students to answer (Bain, 2004) and which the integrated inquiry process can promote. The course learning outcomes (affective, process, psychomotor, skill and cognitive) are assessed for their relationship (integration) within and between course formats, as well the role of inquiry in achieving the outcomes. Enhancing inquiry skills may need to be incorporated within course outcomes, depending on the needs, experience and skill levels of students. Organizational and structural features of the course are evaluated for their potential to promote and/or thwart effective integration of inquiry within and between course components. Assessment of learning is integrated within all course components, blends individual and collective assessment, is meaningfully synthesized within instructional and learning activities, and informs course progression and development. Metacognitive inquiry, or the ways that students can reflect upon and articulate the integration between course learning activities, modes and formats, as well as critically assess their learning (Akyol & Garrison, 2011) allows students and instructors to monitor, make sense and develop deeper understandings of the learning process over time.

The model is process-oriented and nonlinear, so that dialogue about any of the components can proceed in any order, depending upon the context and needs of the program or course planner. Dialogue is prompted by generative questions for each domain, intended to support exploration of that domain, as well as integration between domains. For example, the question, “Ideally, what form(s) would I like discussions to take in this course?” might begin within the goals for inquiry domain, but depending

upon the direction of inquiry, could overlap with course organization and structure, larger questions addressed by the course, and instructor orientations toward inquiry, among others. As the model indicates, the implications for this exploration also are also connected to the hybrid communication medium(s) considered, such as conversation envisioned separately or simultaneously in small group, large group, face-to-face, online, campus, community, or other possibilities afforded by the hybrid context.

The role of the conversation facilitator is to actively listen and track instructors' insights and connections within and between domains, reflecting those insights back in the role of storyteller and interpreter, rather than expert evaluator (Fenwick, 2000). In this way, the process mirrors the practical inquiry cycle in the community of inquiry model: the generative questions act as triggering events for exploration, integration, and in the context of the enacted course, resolution. Likewise, it reflects the practice of experiencing what one seeks to learn (Dewey, 1938; Kolb, 1970); a reciprocal process of inquiry and learning in which disciplinary and philosophical differences are acknowledged (Walker, 2002), and an approach that builds on aptitudes and strengths, rather than focusing on identifying deficits (Weimer, 2010).

Recommendation Three: Communities of Inquiry for Developing CoI

The results from this study illustrate the numerous roles simultaneously involved in hybrid teaching, as well as interrelated pedagogical practices implied by students' observations of both integration and inquiry in hybrid learning. Many practices involved overlapping pedagogical roles, multiplying their complexity. Although the need for

professional programs for instructors transitioning to hybrid learning is universally acknowledged in the literature, researchers and practitioners are becoming increasingly critical of what they perceive as a common approach to hybrid programmatic activities: approaches that emphasize the transmission of information about hybrid learning, often neglecting critical reflection over instructional beliefs, increased awareness of instructional roles, instructor professional identities, and other potential avenues to professional transformation. As Comas-Quinn (2011) argues, "it is about learning to teach online rather than learning to become an online teacher" (230).

Caufield (2011) is unique among hybrid researchers in that he advocates incorporating learning theory, including diverse conceptions of experiential learning, into hybrid programming so that those environments might facilitate more intentional and effective experiential learning activities. He does not, however, address how educational leaders might themselves create communities of learning connected to hybrid efforts. Garrison and Vaughan (2008) have researched and applied a program model that attempts to create a faculty hybrid community of inquiry that includes not only hybrid practices but the connection between teaching practices and student learning (p. 52). However, in their case, the size of monetary awards for participation and the length of participation (six months at least) may not be realistic on many campuses. Regardless of resources limitations, educational leadership for hybrid learning should take an integrated inquiry approach, and this could be facilitated in the following ways:

1. Facilitating a community of inquiry within a interdisciplinary hybrid faculty learning community, in which participants are engaged not only in learning about hybrid

teaching practices, but are also involved in actively creating and practicing pedagogical strategies for facilitating integrated inquiry within and between formats;

2. Making the decisions informing faculty hybrid communities of inquiry transparent and open to negotiation, particularly those decisions related to integration, inquiry, presence, approaches to learning and pedagogical practices (Campbell, Schwier & Kenny, 2010);

3. Supporting communities of inquiry within academic departments, with the goal of listening to and understanding traditions and disciplinary meaning systems as they are applied to hybrid learning and related teaching processes, as well as identifying commonly noted challenges that faculty from various disciplines could potentially collectively address (Wallace & Young, 2010);

4. Incorporating reflection and dialogue about inquiry processes into hybrid course development, using a heuristic model such as the one currently being developed by the researcher, including opportunities to connect emergent beliefs about teaching and learning to pedagogical practices associated with inquiry;

5. Making transparent the philosophical differences and diverse discipline-based understandings about learning and teaching that surface within reflection and dialogue about inquiry (Gergen, 1997);

6. Supporting communities of inquiry focused on hybrid teaching and classroom research once hybrid programming is complete and courses are underway (thus providing more opportunity for "resolution" in the practical inquiry cycle);

7. Integrating hybrid programming with complimentary campus or department initiatives; for example, student success, engagement or retention efforts in which pedagogical practices connected to reflective inquiry could be framed in association with their potential impact on those efforts;

8. Integrating hybrid programming with opportunities for research and scholarship on hybrid learning, and concurrently reassess university service and scholarship guidelines to explore more inclusive ways to formally reward the development of innovative hybrid programs that both maximize resources and promote deep learning.

The underlying assumption of these recommendations is that a multifaceted, multilevel approach to integrating inquiry about hybrid learning institutionalization can result in more widespread understanding of the impact and evolution of hybrid programming efforts beyond individual course and program settings.

Recommendation Four: A Focus on Equity Issues within Presence

Promoting Social Presence and Inclusive Pedagogical Practices

The importance of social presence to the development of cognitive presence should be incorporated into hybrid professional programming to provide research-based, conceptual grounding for considering pedagogical practices consistent with courses characterized in this study as integrated/inquiry. Likewise, specific examples of effective practices from experienced hybrid course faculty could provide concrete application of these ideas. Not only would this assist in promoting faculty with aspects of pedagogy not

traditionally emphasized in higher education (Garrison, 2007), but could also result in practices more inclusive of a wider range of students' learning approaches and experiences.

The ability of students to be present socially and cognitively based on different life experience is another important area that should be considered in hybrid instructional programs. Faculty and instructional staff could consider together the possible course development implications for students with less access to technology, who are not native speakers of English, who may need more structure or personal guidance, who need more coaching to adapt to changing faculty and student roles, who are returning to college after extended absence, and many other equity concerns. Additionally, since unequal power and privilege dynamics reflective of the society-at-large have been shown to easily migrate online (Gorski, 2009), hybrid programming should also include attention to problematic inequities that can potentially proliferate as students adapt to increased independence, discussions, collaborative work, and online interactions.

The Status of Social Presence and Educational Equity

In the community of inquiry framework, perceptions of social presence are associated with perceptions of cognitive presence, but rarely is social presence associated with equity issues that can hinder transformative and empowering learning experiences. Pedagogical practices associated with deliberate facilitation of social presence were not commonly observed by students in this study, and have not been traditionally emphasized in teacher-centered approaches to higher education (Conti, 2004). Lack of deliberate, strategic attention to social presence in hybrid courses may unintentionally reinforce

transmission-orientated, "banking model" approaches to adult education (Freire, 2000), compounded by perceptions of less connection to instructors. Additionally, Fenwick (2003) argues that "[w]hen adults participate in systems and exchanges where power is unequally distributed, where the focus is on technical rational control and where they are unaware of their own human potential, they shrivel" (p. 31).

Hybrid programming should include more than just a promotion of social presence for purposes of cognitive outcomes. Kezar (2004) argues that a university's integrity is enacted through an institutional mindfulness of and respect for its responsibilities to surrounding communities, and to the society-at-large. The hybrid literature has been largely silent on questions connected to the possibilities that hybrid settings may simultaneously create and restrict educational access and equity. For example, how can hybrid settings provide support for students are most at risk for completing college? Are hybrid courses equally effective for first-year undergraduates making the transition to college, when learning environments that facilitate a successful transition to the expectations and unspoken norms of higher education are greatly needed? Are all students equally prepared to negotiate the "hidden curriculum" of online and partially online education (Anderson, 2002)? What is assumed about students' cultural capital for doing so? Stirling, Hopkins Riddick (2010) observe that "we cannot assume that all those who access higher education through a regional campus will necessarily have the technological experience or computer literacies required to successfully interact with multimedia resources" (p. 51). These are but a few of the potential equity issues that must take precedence in discussions on hybrid learning.

Hybrid Educational Leaders as Unapologetic Change Agents

Campbell, Schwier, and Kenny (2005) argue that hybrid and online educational leaders should view their role unapologetically as agents of social change at the personal, relational and institutional levels, "not journeymen workers directed by management but act in purposeful, value-based ways with ethical knowledge, in social relationships and contexts that have consequences in and for action" (p. 1). Although evolving, the field of Instructional Design in higher education has been heavily dominated by positivistic assumptions and scientific principles operating outside of social, political, cultural, and personal contexts, and only recently has the field begun to consider alternative conceptions of learning and organizational development (Cooner, 2010; Li, Clarke & Winchester, 2010). Ethical dimensions of hybrid planning, teaching and learning associated with issues connected to equity, access, social and cultural capital and inclusivity should be explicitly included in discussions of hybrid teaching and learning through reflexive dialogue. For example, in the context of online and partially online learning, Campbell, Schwier & Kenny (2010) encourage educational leaders to explicitly explore the multiple influences on practices and "personal resistances to change ... by asking ourselves: Who am I, why am I practicing this way, and what effect does this have on others?" (p. 23).

Future Research

Research on Presence

Integration and presence.

Experienced hybrid researcher and instructor Jay Caulfield observed that integrating various components of hybrid courses continues to be one of the most difficult challenges he faces when planning and teaching hybrids (Caulfield, 2011). In addition to research on pedagogical practices associated with effective integration of hybrid formats, more research on the relationship between well-integrated course models and perceptions of presence is suggested by this study. Students in both transmission and inquiry-focused courses that were perceived as well-integrated also perceived higher levels of teaching and social presence overall, but the exact nature of this relationship is unclear.

Research on hybrid courses such as those identified in this study as "integrated/inquiry" could focus on practices and processes associated with high levels of sustained, critical inquiry and perceptions of consistent integration between course components. Such research could perhaps potentially provide greater understanding of perceptions of community in hybrid courses. Brown, Smith and Henderson (2007) observe that "[d]esigning and facilitating effective collaborative communities of practice is itself an area that merits attention" (p. 158). Students in "integrated/inquiry" courses often recalled with much appreciation the early efforts made to establish cohesion and community in both course formats. The integrated/inquiry Framework under development by the researcher could be used as one heuristic for studying hybrid

pedagogical practices associated with inquiry and perceptions of collaborative communities.

Integration, inquiry and cognitive presence.

The relationships between integration, inquiry, and the development of cognitive presence is another avenue of investigation suggested by the current findings. As Dzuiban, Hartmann, and Moskal (2007) ask, "how can we make critical thinking an operational construct in higher education through blended models?" (p. 284). For example, Picciano (2002) found that students' perceptions of social presence were associated with significantly higher performance on essay examinations, but no such relationship between presence and performance existed when the assessment was a multiple choice examination. How, and in what ways the assessment of inquiry processes impacts social and cognitive presence is a potentially fruitful area of inquiry.

Interrelationship between presences in hybrid settings.

Indicators of presence connected to students' perceptions of learning in this study confirm what many researchers have recently observed, that the presences are not experienced as distinct dimensions and are frequently interrelated. Redmond and Lock's (2006) framework for studying the interrelationship between presences suggests that the process of inquiry begins with social presence, which then builds a foundation for teaching presence, and combines to build increasing cycles of cognitive presence. In the current study, focus groups provided some insight into the nature of the presence relationships; however, longitudinal research designs (e.g., ongoing interviews, multiple survey comparisons, or longitudinal case studies) using Redmond and Lock's (2006) or

similar frameworks might provide a deeper understanding as to the development of relationships between presences.

Learning and presence.

More investigation into the relationship between student learning and perceptions of presence is needed, especially well-designed studies that investigate not only perceptions of learning, but learning experiences and outcomes in the context of the community of inquiry. A central insight provided by this study, that courses characterized by integrated/inquiry were associated with the greatest number of all four elements of the practical inquiry cycle, could be strengthened by including results aimed at assessing the outcomes of learning connected to integrated inquiry. Similarly, Goodyear and Ellis (2007) argue that "...the focus of research should be on holistic aspects of the student learning experience, and especially on how well the different components of that learning experience are integrated, and what this means for learning" (p. 239). As mentioned previously, research on hybrid learning should include affective, engagement, process and developmental components as well as cognitive (Fink, 2003).

Research on Faculty and Students' Experiences

Future research should address the experiences of faculty in hybrid settings, particularly how faculty and student roles evolve, how faculty from different disciplinary backgrounds approach hybrid teaching, and the impact of the hybrid teaching experience on the pedagogical philosophies of instructors. The latter subject has received recent but scant attention both in the CoI literature (Akyol, Ice, Garrison & Mitchell, 2010) and in the hybrid literature more broadly (Kaleta, Skibba & Joosten, 2007; Stacey &

Wiesenber, 2007). Research conclusions are mixed as to whether hybrid environments encourage a more learner-centered, constructivist approach to teaching, not unlike the wide range of pedagogical approaches suggested by students' perceptions in this study. An investigation into the instructors' epistemological orientations toward teaching and identities as teachers in hybrid settings is needed to further understand these relationships.

Research on students' experiences should be expanded to understand how hybrid learning is experienced by different populations of students, including traditionally underrepresented student groups, and demographic groups most at risk in terms of degree completion. This research should include students' perspectives on effective hybrid pedagogical and organizational practices. Finally, research on student learning should focus on understanding how students develop "teaching presence" or educational leadership in hybrid settings. Shea et. al (2012) have recently created a new conceptualization of this role connected to the community of inquiry framework entitled, "Learning Presence" and although nascent, appears to hold some potential for further inquiry.

Study Limitations

Sample

Because the hybrid assessment process was not mandatory, participation rate was approximately 75%. This represents good participation overall, but some courses not participating may have been experiencing challenges, based on comments made by

faculty to the researcher. Since challenges in the teaching and learning environment can also point to insights about social, teaching, and cognitive presence (Garrison & Vaughan, 2008), important perspectives on learning and pedagogical practices may be missing from the data. Faculty in the sample represent early adopters of hybrid teaching at HU, and tended (as a group) to be experienced with technology. They may not be entirely representative of the campus as a whole in that regard. The students in the sample were not asked for any demographic data, so the data is limited to year in school. Other than the limited number of student comments including identification with a particular group or course setting, it is not possible to meaningfully explore any themes about students' perceived learning related to age, gender, race, ethnicity, experience with technology, number of previous hybrid courses taken, learning style, or a variety of other possible factors.

SGID Process

SGID data represents first-order interpretation: A level of interpretation has already occurred by the student note taker in the group. Although the procedures described above for preparing facilitators and facilitating the groups assist with greater reliability and validity, the data is still filtered once before analysis, and is not verbatim. Additionally, the researcher could not follow up with students about the indicators of presence found in their observations about learning. Many questions arose during this process, such as why class time was perceived by students to be the primary venue for clarification and guidance. Although every attempt was made to ensure reliability of findings, including continual evaluation as to the appropriate grounding of the

researchers' interpretations within students' observations, the possibility of following up on questions raised by conflicting observations in the data was impossible

Similarly, since the assessments were originally designed to focus on students' experiences of learning, rather than constructs related to presence, findings are limited only to observations about presence that occurred to students while reflecting on their learning experiences more broadly. Questions that might have asked students to follow up on potentially informative presence categories, such as students' suggestions for change to directed facilitation practices, were not possible in a secondary analysis of preexisting data.

Finally, the SGID questions may not have generated detailed data on cognitive presence. Although the findings in this study correlate with a number of studies confirming disappointingly low levels of cognitive presence, it is still possible that students directly equated indicators of cognitive presence with "learning," and thus may not mentioned some indicators explicitly, compared with social and teaching presence. Cognitive presence is operationalized as an inquiry cycle that may not have been identified in some courses, for example, courses in the nonintegrated/transmission category. If this was the case, the focus group data may not be as sensitive as a survey instrument to the subtle ways that this presence occurs. On the other hand, the data did provide some insight into students' perspectives on how cognitive presence progressed, or failed to progress beyond the exploration stage.

Instructors' Perspectives

Perspectives from hybrid instructors, the individuals whose actions were often the subject of students' observations about learning, are missing from this study. Although students' perceptions were the central focus of this investigation, instructors' views on the nature of presence can provide an illuminating and contrasting viewpoint on the hybrid learning environment. For example, Napier, Dekhane and Smith (2011) found that multiple actions instructors perceived to be promoting teaching presence online (such as clarification and feedback) were not necessarily perceived as teaching presence by their students. In the current study, if students perceived the absence of teaching presence related to some aspect of learning, then this perception constitutes their learning "reality" and is therefore significant. However, these findings must also be interpreted with the awareness that practices potentially connected to presence may have been intended or implemented within either or both learning environments in some cases, whether or not they were perceived as such.

Setting

Research was conducted in classrooms, which meant that the researcher had direct access to students and could encourage elaboration of responses within groups, as well as take notes on additional relevant information such as the general tone and affect of students' responses. However, the researcher's perspective on students' learning in these courses is limited; in most cases a portion of class was observed on the day of assessment, but still only represents a slice of the complex community of interactions that develop over the evolution of a course. Also, since assessments took place at midquarter,

the data does not reflect the possible evolution of and connections between presences that may have emerged in students' perspectives on learning later in the courses. Information about students' course performance and achievement of course outcomes are likewise missing. Finally, although some insights from this study have resonated with related findings in the hybrid literature, the experiences of students at H.U. may in many ways be institution-specific and cannot be generalized to students' experiences in hybrid settings at other locations.

Conclusion

Like most learning environments, hybrid learning involves complex interactions of interrelated elements, many of which researchers are just beginning to explore.

Dzuiban, Hartmann and Moskol (2007) suggest a few of the elements operating in hybrid settings, including "pedagogical transformation, new roles for both instructors and students, technology infrastructure, support mechanisms, and strategic planning to name just a few" (p. 275). Each one of these elements is connect to an equally complex set of components to support its development, suggesting a "complex system - the implications of which cannot necessarily be understood through a direct cause and effect relationship" (p. 275).

At the same time, understandings of hybrid learning are evolving during a period of transition in postsecondary education, what some scholars would call a shift from modernist to postmodernist conceptions of educational assumptions and practices (Usher & Edwards, 1994). For example, Gergen (1991) observes that

Traditional educational practices are built around improving the minds of single individuals. Sustained by modernist assumptions, teachers and professors take the role of authorities in a given subject, their task to fill the students' minds with knowledge of their specialty. The postmodernist, however, would view academic subjects as forms of discourses peculiar to communities (biologists, etc) engaged in different activities. Students themselves are experts within the discourses of their own particular subcultures -- languages that help them to maintain their lifestyles and adapt to the world as they construct it. Thus, education should not be a matter of replacing "poor" with "superior" knowledge, but should be a dialogue, in which all subcultures may benefit from the discourses of their neighbors. Teachers would invite students into modes of dialogue as participants rather than pawns, as collaborative interlocutors instead of slates to be filled. Ideally, the circumscribed discourse of the "disciplines" should also be rendered vulnerable -- open to extension, elaboration, and enrichment through the commingling of languages" (p. 250).

Viewed within the larger landscape of postsecondary change and transition, hybrid learning is a touchstone for new understandings and contested conceptions of education. Throughout the assessment work that provided the foundation for this study, the researcher sat among students who recognized the power of their voices in learning, sometimes for the first time in their educational experience, and listened to faculty who honestly shared their reactions to hearing those voices. The result was a renewed sense of potential - the potential for hybrid initiatives to open new spaces within the academy to reexamine the nature of education and deep learning. Yet, as promising as “enrichment through the comingling of languages” (Gergen, 1991, p. 251) may be, this study has also acknowledged that the values, beliefs and assumptions that underlie fresh observations about education are too often discounted or glossed over, leading to decreased, rather than increased understandings of teaching and learning.

There is more to be learned about learning in hybrid settings than how learning happens in hybrid settings. In the spirit of integrated inquiry, educational leaders must commit to deliberate facilitation and integration of differing perceptions, beliefs and motives connected to hybrid teaching and learning across subcultures of their institutions. Gergen (1997) asks, “[c]an the voices of front-line practitioners – struggling to articulate the challenges of the new – be amalgamated into more robust and compelling vehicles of comprehension?” (p. 375). Particularly when the “vehicles of comprehension” run counter to prevailing pressures based on legitimizing norms of efficiency and cost effective delivery, a blend of the economic realities and the public aims of education must both inform hybrid programming efforts. Higher education has much to gain if, in

the process of addressing the increasing pressures it faces in the twenty-first century, more widespread understanding of deep and transformative learning might emerge as a result.

References

- Abrams, Z. (2005). ACMC, collaboration and the development of critical thinking in a graduate seminar in applied linguistics. *Canadian Journal of Learning Technology*, 31(12), 23-47.
- Akyol, Z., Arbaugh, J.B., Cleveland-Innes, M., Garrison, D.R., Ice, P., Richardson, J.C. & Swan, K. (2009). A response to the review of the community of inquiry framework. *Journal of Distance Education*, 23(2), 123-136.
- Alexander R.(2003) *Still no pedagogy? Principle, pragmatism and compliance education*. Cambridge: University of Cambridge.
- Akyol, Z., Ice, P., Garrison, R., & Mitchell, R. (2010). The relationship between course socio-epistemological orientations and student perceptions of community of inquiry. *Internet and Higher Education*, 13, 66-68.
- Akyol, Z., Garrison, D.R. & Ozden. M.Y. (2009). Online and blended communities of inquiry: Exploring the developmental and perceptual differences. *International Review of Research in Open and Distance Learning*, 10 (6), 65-83.
- Akyol, Z. & Garrison, D.R. (2011). Assessing metacognition in an online community of inquiry. *Internet and Higher Education*, 14, 183-190.
- Akyol, Z. & Garrison, D.R. (2011). Understanding cognitive presence in an online and blended community of inquiry: Assessing outcomes and processes for deep approaches to learning. *British Journal of Educational Technology*, 42(2), 233-250. doi: 10.1111/j.1467-8535.2009.01029.x

- Allen, I.E. & Seaman, J. & Garrett (2007). Blending in: The extent and promise of blended education in the united states. Retrieved from <http://sloanconsortium.org/publications/survey/blended06>
- Anderson, J. & Adams, M. (1992). Acknowledging the learning styles of diverse student populations: Implications for instructional design. *New Directions for Teaching and Learning*, 49, 19-33.
- Anderson, R., Rourke, L., Garrison, D.R., & Archer, S. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5 (2), 1-17.
- Anderson, T. (2002). The hidden curriculum in distance education: An updated view. In Vrasidas and Glass (Eds.), *Distance education and distributed learning: Current perspectives on applied information technologies*. Greenwich, CT: Information Age Publishing.
- Anderson, T. (2004). Teaching in an online learning context. In T. Anderson & F. Elloumi (Eds.) *Theory and practice of online learning* (pp. 273-294). Athabasca, AB.: Athabasca University.
- Angeli, C., Bonk, C., and Hara, N. (1998). Content analysis of online discussion in an applied educational psychology course. *CRLT Technical Report No. 2-98*, 3-9.
- Angelo, T.A. & Cross, K.P. (1993). *Classroom assessment techniques: A handbook for college teachers*. San Francisco: Jossey-Bass.
- Aragon, S.R. (2003). Creating social presence in online environments. *New Directions for Adult and Continuing Education*, 100, 57-68.

- Arbaugh, J.B. (2001). How instructor immediacy behaviors affect student satisfaction and learning in web-based courses. *Business Communication Quarterly*, 64 (4), 42-54.
- Arbaugh, J.B. (2005). Is there an optimal design for on-line MBA courses? *Academy of Management Learning and Education*, 4, 135-149.
- Arbaugh, J., Bangert, A., & Cleveland-Innes, M. (2010). Subject matter effects and the community of inquiry (CoI) framework: An exploratory study. *The Internet and Higher Education*, 13(1-2), 37-44.
- Arbaugh, J. & Benbaum-Fich, R. (2006). An investigation of epistemological and social dimensions of teaching in online learning environments. *Academy of Management Learning and Education*, 5(4), 435-337.
- Ashton, J. & Elliott, R. (2007). Juggling the balls - study, work, family and play: Student perspectives on flexible and blended heutagogy. *European Early Childhood Education Research Journal*, 15(2), 167-181.
- Ausburn, L.J. (2004). Course design elements most valued by adult learners in online education environments: An American perspective. *Education Media International*, 41(4), 327-337.
- Bain, K. (2004). *What the best college teachers do*. Boston, MA: Harvard University Press.
- Bangert, A.W. (2008). The effects of social presence and teaching presence on the quality of critical inquiry for a web-based statistics course. *Journal of Computing in Higher Education*, 20(1), 34-61.

- Barr, R.B., & Tagg, J. (1995). From teaching to learning: A new paradigm for undergraduate education. *Change, Nov/Dec.*, 13-25.
- Belenky, M.F., Clinchy, B.M., Goldberger, N.R. & Tarule, J.M. (1986). *Women's ways of knowing: The development of self, voice, and mind*. New York: Basic Books.
- Benbunan-Fich, R. and Hiltz, S. R. (2003). Mediators of the effectiveness of online courses. *IEEE Transactions on Professional Communication*, 46, 4, 298-312.
- Berge, Z.L. (1995). Facilitating computer conferencing: Recommendations from the field. *Educational Technology*, 35(1), 22-30.
- Betts, K. & Hartman, K., & Oxholm, J.D. (2010). Re-examining and repositioning higher education: Twenty economic and demographic factors driving online and blended program enrollments. *Journal of Asynchronous Learning Networks* 9(1). The Sloan Consortium. ISSN: 1541-2806.
- Biocca, F., Harms, C. & Burgoon, J.K. (2003). Towards a more robust theory and measure of social presence: Review of suggested criteria. *Presence*, 12(5), 456-480.
- Black, B. (1998). Using the SGID method for a variety of purposes. In M. Kaplan (Ed.), *To Improve the Academy* (pp. 245-262). Stillwater, OK: New Farms Press.
- Bloom B. S. (1956). *Taxonomy of educational objectives, handbook I: The cognitive domain*. New York: McKay Publishers.
- Bluic, A.M., Goodyear, P., & Ellis, R.A. (2007). Research focus and methodological issues in studies into students' experiences of blended learning in higher education. *Internet and Higher Education*, 10, 231-244.

- Bonk, C.J. & Graham, C.R. (2006). *The handbook of blended learning*. San Francisco, CA: Wiley & Sons.
- Bonk, C.J., Kim, K.J. & Zeng, T. (2006). Future directions of blended learning in higher education and workplace learning settings. In C.J. Bonk and C.R. Graham (Eds.), *Handbook of blended learning: Global perspectives, local designs*. San Francisco: Pfeiffer.
- Boston, W., Ice, P., Diaz, S., Richardson, J., Gibson, A. & Swan, K. (2009). An exploration of the relationship between indicators of the community of inquiry framework and retention in online programs. *Journal of Asynchronous Learning Networks*, 13(3), 67-83.
- Brookfield, S.D. (2005). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass.
- Brookfield, S.D. (2006). *The skillful teacher: On technique, trust and responsiveness in the classroom* (2nd Ed). San Francisco: Jossey-Bass.
- Brown, G., Smith, T. & Henderson, T. (2007). Student perceptions of assessment efficacy in online and blended learning classes. In A. G. Picciano, & C. D. Dziuban (Eds.), *Blended learning: Research perspectives* (111-143). Needham, MA: Sloan Consortium.
- Campbell, K., Schwier, R.A. & Kenny, R.F. (2005). Agency of the instructional designer: Moral coherence and transformative social practice. *Australasian Journal of Educational Technology*, 21(2), 242-262.

- Caulfield, J. (2011). *How to design and teach a hybrid course: Achieving student-centered learning through blended classroom, online and experiential activities*. Sterling, VA: Stylus.
- Celentin, P. (2007). Online training: Analysis of interaction and knowledge building patterns among foreign language teachers. *Journal of Distance Education*, 21 (3), 39-58.
- Clinchy, B.M. (2000). Toward a more connected vision of higher education. *New Directions for Teaching and Learning*, 82, 27-35.
- Comas-Quinn, Anna (2011). Learning to teach online or learning to become an online teacher: An exploration of teachers' experiences in a blended learning course. *ReCALL*, 23(03), 218–232. doi: <http://dx.doi.org/doi:10.1017/S0958344011000152>.
- Conrad, D. (2005). Building and maintaining community in cohort-based online learning. *Journal of Distance Education*, 20(1), 1–20.
- Conti, G. J. (2004). Identifying your teaching styles. In M. W. Galbraith (Ed.), *Adult learning methods: A guide for effective instruction* (3rd Ed.). Malabar, FL: Krieger Publishing Co.
- Cooner, T.S. (2010). Creating opportunities for students in large cohorts to reflect in and on practice: Lessons learnt from a formative evaluation of students' experiences of a technology-enhanced blended learning design. *British Journal of Educational Technology*, 41(2), 271-286.

- Cress, C.M., Donahue, D.M. et. al (2011). *Democratic dilemmas of teaching service-learning: Curricular strategies for success*. Sterling, VA: Stylus.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions* (2nd Ed). Thousand Oaks, CA: Sage.
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson.
- Dailey-Hebert, A., Donnelli-Sallee, E., DiPadova-Stocks, L. (2008). *Service-eLearning: Educating for citizenship*. Information Age Publishing.
- Davies, A., Ramsay, R., Lindfield, H. & Couperthwaite, J. (2005). A blended approach to learning: Added value and lessons learnt from students' use of computer-based materials for neurological analysis. *British Journal of Educational Technology*, 36(5), 839-849.
- De George-Walker, L. & Keeffe, M. (2010). Self-determined blended learning: A case study of blended learning design. *Higher Education Research and Development*, 29(1), 1-13.
- Delialioglu, O. & Yildirim, Z. (2007). Students' perceptions on effective dimensions of interactive learning in a blended learning environment. *Educational technology and Society*, 10(2), 133-146.
- Denzin, N. (1989). *Interpretive interactionism*. Newbury Park: Sage.
- Dewey, J. (1938). *Experience and education*. New York: Collier Books.

- Diamond, N.A. (1988). S.G.I.D. (Small group instructional diagnosis): Tapping student perceptions of teaching. In Wadsworth, E.C. (Ed.), *Professional and organizational development in higher education: A handbook for new practitioners*. Stillwater, OK: New Forums Press.
- Diaz, S.R., Swan, K., Ice, P., & Kupczynski, L. (2010). Student ratings of the importance of survey items, multiplicative factor analysis, and the validity of the community of inquiry survey. *Internet and Higher Education*, 13, 22-30.
- Dixon, M. Kuhlhorst, M. & Reiff, A. (2006). Creating effective online environments: Optimal instructor and student roles. *Journal of Asynchronous Learning Networks*, 10(3), 15-28.
- Duderstadt, J.J., Atkins, D.E., & Van Houweling, D. (2002). *Higher education in the digital age: Technology issues and strategies for American colleges and universities*. Westport, CT: Greenwood Press.
- Duetsch, N. (2010). Instructor experiences with implementing technology in blended courses in higher education. (Doctoral Dissertation.) Retrieved from UMI Dissertation Publishing. (UMI 3429155)
- Dzuiban, C.D., Hartman, J. & Moskal, P. (2007). Everything I need to know about blended learning I learned from books. In A.G. Picciano, & C.D. Dziuban (Eds.), *Blended learning: Research perspectives*. Needham, MA: Sloan Consortium.

- Dziuban, C., Hartman, J., Moskal, P., Sorg, S., & Truman, B. (2004). Three ALN modalities: An institutional perspective. In J. Bourne & J. C. Moore (Eds.), *Elements of Quality Online Education: Into the Mainstream* (pp. 127-148). Needham, MA: Sloan Center for Online Education.
- Dziuban, C.D., Moskal, P. & Futch, L. (2007). Reactive behavior, ambivalence, and the generations: Emerging patterns in student evaluation of blended learning. In A.G. Picciano, & C.D. Dziuban (Eds.), *Blended learning: Research perspectives*. Needham, MA: Sloan Consortium.
- Dziuban, C., Moskal, P., & Hartman, J. (2005). Higher education, blended learning, and the generations: Knowledge is power--no more. In J. Bourne & J.C. Moore (Eds.), *Elements of quality online education: Engaging communities* (pp. 85-102). Needham, MA: Sloan-C.
- Edginton, A. & Holbrook, J. (2010). A blended learning approach to teaching basic pharmacokinetics and the significance of face-to-face interaction. *American Journal of Pharmacy Education*, 74(5). Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2907853/>
- Ellis, R.A. & Calvo, R.A. (2004). Learning through discussions in blended environments. *Educational Media International*, 263-274. doi: 10.1080/09523980410001680879
- Ellis, R.A., Goodyear, P., O'Hara, A. & Prosser, M. (2007). The university student experience of face-to-face and online discussions: coherence, reflection and meaning. *Research in Learning Technology*, 15(1), 83-97.

- Elo, S. & Kyngas, H. (2007). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107-115.
- Ernest, P. (1994). Varieties of constructivism: Their metaphors, epistemologies and pedagogical implications. *Hiroshima Journal of Mathematics Education*, 2, 1-14.
- Ertmer, P. A., Richardson, J. C., Lehman, J. D., Newby, T. J., Cheng, C., Mong, C., & Sadaf, A. (2010). Peer feedback in a large undergraduate blended course: Perceptions of value and learning. *Journal of Educational Computing Research*, 43(1).
- Fallahi, C.R., Levine, L.E., Nicoll-Senft, J.M., Tessier, J.T., Watson, C.L., & Wood, R.M. (2009). Using fink's integrated course design: How a book changed our students' learning, our university, and ourselves. *New Directions for Teaching and Learning*, 119, 43-52. doi: 10.1002/tl.363
- Finegold, A.R.D. & Cooke, L. (2006). Exploring the attitudes, experiences and dynamics of interaction in online groups. *Internet and Higher Education*, 9(3), 201-215.
- Fenwick, T.J. (2000). Expanding conceptions of experiential learning: A review of the five contemporary perspectives in cognition. *Adult Education Quarterly*, 50(4), 243-272.
- Fenwick, T. (2003). *Learning through experience: Troubling orthodoxies and intersecting questions*. Malabar, FL: Krieger.
- Fink, D.L. (2003). *Creating significant learning experiences*. San Francisco: Jossey-Bass.

- Fink, D. L. & Fink, A.K. (2009). Designing courses for significant learning: Voices of experiences. *New Directions for Teaching and Learning*, 119. San Francisco: Jossey-Bass.
- Freire, P. (2000). *Pedagogy of the oppressed* (2nd Ed.). New York: Continuum Press.
- Garrison, D.R. (2006). Online collaboration principles. *Journal for Asynchronous Learning Network*, 10 (1). Retrieved from http://www.sloanc.org/publications/jaln/v10n1/v10n1_3garrison_member.asp
- Garrison, D.R. (2007). Online community of inquiry review: Social, cognitive and teaching presence issues. *Journal of Asynchronous Learning Networks*, 11(1), 61-72.
- Garrison, D.R., Anderson, T. & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education*, 2 (2-3), 87-105.
- Garrison, D.R., Anderson, T. & Archer, W. (2001). Critical thinking, cognitive presence and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7-23.
- Garrison, D.R., Anderson, T. & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *Internet and Higher Education*, 13, 5-9.
- Garrison, D.R. & Arbaugh, J.B. (2007). Researching the community of inquiry framework: Review, issues and future directions. *Internet and Higher Education*, 10, 157-172.

- Garrison, D.R. & Archer, W. (2003). A community of inquiry framework for online learning. In M. Moore (Ed.), *Handbook of Distance Education*. New York: Erlbaum.
- Garrison, D.R. & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *American Journal of Distance Education*, 19(3), 133-148.
- Garrison, D.R., Cleveland-Innes, M., & Fung, T.S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *Internet and Higher Education*, 13, 31-36.
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, 7 (2), 95-105.
- Garrison, D.R. & Vaughan, N.D. (2008). *Blended learning in higher education: Framework, Principles and Guidelines*. San Francisco: Jossey-Bass.
- Gergen, K. (1991). *The saturated self: Dilemmas of identity in contemporary life*. New York: Basic Books.
- Gergen, K. (1997). Organization science in a postmodern context. *Journal of Applied and Behavioral Science*, 32, 356-377.
- Glaser, B.G. & Strauss, A.L., (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, Il: Aldine Publishing.

- Glogowska, M., Young, P., Lockyer, L. & Moule, P. (2011). How blended is blended learning? Students' perceptions of issues around the integration of online and face-to-face learning in a continuing professional development (CPD) health care context. *Nurse Education Today*, 31(8), 887-891. doi: <http://dx.doi.org/10.1016/j.nedt.2011.02.003>
- Goodyear, G. & Allchin, D. (1998). Statements of teaching philosophy. *To Improve The Academy*, 17, 103-122.
- Gorksi, P.C. (2009). Insisting on digital equity: Reframing the dominant discourse on multicultural education and technology. *Urban Education*, 44(3), 348-464.
- Graff, M. (2003) Individual differences in sense of classroom community in a blended learning environment. *Journal of Educational Media*, 28(2-3), 203-210.
- Graham, C.R. (2006). Blended learning systems: Definition, current trends and future directions. In C.J. Bonk and C.R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs*. San Francisco: John Wiley & Sons.
- Graham, C.R. & Robison, R. (2007). Realizing the transformational potential of blended learning. In A. G. Picciano, & C. D. Dziuban (Eds.), *Blended learning: Research perspectives* (111-143). Needham, MA: Sloan Consortium.
- Grandzol, C. & Grandzol, J. (2010). Interaction in online courses: More is not always better. *Online Journal of Distance Learning Administration*, 8(2). Retrieved from: http://www.westga.edu/~distance/ojdla/summer132/Grandzol_Grandzol132.html.

- Greener, S.L. (2008). Self-aware and self-directed: Student conceptions of blended learning. *Merlot Journal of Online Learning and Teaching*, 4(2), 243-253.
- Gulbahar, Y. & Madran, O. (2009). Communication and collaboration, satisfaction, equity and autonomy in blended learning environments: A case from Turkey. *International Review of Research in Open and Distance Learning*, 10(2), 1-22.
Retrieved from <http://www.irrodl.org>.
- Gumport, P. J. and Chun, M. (2005). Technology and higher education: Opportunities and challenges for the new era. In P. Altbach, R. Berdahl, and P. J. Gumport (Eds.) *American higher education in the 21st century: Social, political, and economic challenges*. Second Edition. Baltimore, MD: Johns Hopkins University Press.
- Gunawardena, C. & Zittle, F. (1997). Social presence as a predictor of satisfaction within a computer mediated conferencing environment. *American Journal of Distance Education*, 11(3), 8-26.
- Heppner, F. (2007). *Teaching the large college class: A guidebook for instructors with multitudes*. San Francisco: Jossey-Bass.
- Holley, D. & Oliver, M. (2010). Student engagement and blended learning: Portraits of risk. *Computers and Education*, 54(3), 693-700.
doi: <http://dx.doi.org/10.1016/j.compedu.2009.08.035>
- Holstein, J. & Gubrium, J. (1994). Phenomenology, ethnomethodology and interpretive practice. In Denzin, N. & Lincoln, Y. (Eds.), *Handbook of qualitative research*. Thousand Oaks, CA: Sage.

- Huber, M.M. (2009). Shoeboxes and taxes: Integrated course design unleashes new creativity for a veteran teacher. *New Directions for Teaching and Learning*, 119, 9-15. doi: 10.1002/tl.359
- Hughes, G. (2007). Using blended learning to increase learner support and improve retention. *Teaching in Higher Education*, 12(3), 349-363.
- Jackson, M.J., & Helms, M.M. (2008). Student perceptions of hybrid courses: Measuring and interpreting quality. *Journal of Education for Business*, 84, 7-12.
- Jorgensen, D. (1989). *Participant observation: A methodology for human studies*. Thousand Oaks, CA: Sage.
- Kaletka, R., Skibba, K., & Joosten, T. (2007). Discovering, designing and delivering hybrid courses. In A. G. Picciano, & C. D. Dziuban (Eds.), *Blended learning: Research perspectives* (111-143). Needham, MA: Sloan Consortium.
- Kezar, A.J. (2004). Obtaining integrity? Reviewing and examining the charter between higher education and society. *The Review of Higher Education*, 27(4), 429-459.
- Kirk, J. & Miller, M. (1986). *Reliability and validity in qualitative research*. Newbury Park: Sage.
- Kolb, D.A. & Lewis, L.H. (1986). Facilitating experiential learning: Observations and reflections. *New Directions for Adult and Continuing Education*, 30, 99-107. doi: 10.1002/ace.36719863012.
- Krueger, R.A. (1998). *Analyzing and reporting focus group results*. Thousand Oaks, CA.: Sage.

- Laird, T.F., Shoup, R. & Kuh, G.D. (2005). Deep learning and college outcomes: Do fields of study differ? Paper presented at the annual meeting of the Association for institutional research. San Diego, CA.
- Lakoff, G. & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
- Lattuca, L.R. & Stark, J.S. (2009). *Shaping the college curriculum: Academic plans in context*. San Francisco: Jossey-Bass.
- Li, Q., Clark, B., & Winchester, I. (2010). Instructional design and technology grounded in evactivism: A paradigm shift? *British Journal of Educational Technology*, 41(3), 403-419.
- Ligorio, M. B., & Sansone, N. (2009). Structure of a blended university course: Applying constructivist principles to a blended course. In C. R. Payne (Ed.) *Information technology and constructivism in higher education: Progressive learning frameworks*. London: IGI Global.
- Lincoln, Y. (1996). At the contentious edge: Postmodern criticisms of modernist science. Paper prepared as an address, Portland, Oregon, April 26, 1996.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Lofland, J., Snow, D.A., Anderson, L., & Lofland, L.H. (2005). *Analyzing social settings: A guide to qualitative observation*. Belmont, CA: Wadsworth.
- Magnussen, L. (2008). Applying the principles of significant learning in the e-Learning environment. *Journal of Nursing Education*, 47(2), 82-86.
- Maxwell, J. A. (2005). *Qualitative research design: An interactive approach*. (2nd Ed.). Thousand Oaks, CA: SAGE Publications.

- McCracken, G. (1988). *The long interview*. Newbury Park: Sage.
- McDonald, J. (1998). Interpersonal group dynamics and development in computer conferencing. *American Journal of Distance Education*, 12(1), 7-25.
- McGowan, W.R. & Osguthorpe, R.T. (2011). Student and faculty perceptions of effects of midcourse evaluation. In Miller, J.E. & Groccia, J.E. (Eds.), *To Improve the Academy: Resources for Faculty, Instructional and Organizational Development*, 29, 160-172.
- Meyer, K.A. (2003). Face-to-face vs. threaded discussions: The role of time and higher order thinking. *Journal of Asynchronous Learning Networks*, 7(3), 55-65.
- Meyer, K.A. (2007). Student perceptions of face-to-face and online discussions: The advantage goes to ... *Journal of Asynchronous Learning Networks*. 11(4), 53-69.
- Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformation theory. In Mezirow et. al (Eds.), *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco: Jossey-Bass.
- Mitchell, P. & Forer, P. (2010). Blended learning: Perceptions of first-year geography students. *Journal of Geography in Higher Education*, 34(1), 77-89.
- Morgan, D.L. (1988). *Focus groups as qualitative research*. Newbury Park, CA: Sage.
- Morgan, D. L. (1997). *Focus groups as qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Morgan, D.L. (1998). *The focus group guidebook*. Thousand Oaks, CA: Sage.

- Murphy, E. (2004). Identifying and measuring ill-structured problem formation and resolution in online asynchronous discussions. *Canadian Journal of Learning and Technology*, 30(1), 5-20.
- Myerton, J.E. (2006). An examination of faculty experiences with hybrid formats. (Unpublished doctoral dissertation). Portland State University, Portland, Oregon.
- Nagel, L., & Kotze, T. (2010). Supersizing e-learning: What a CoI survey reveals about teaching presence in a large online class. *The Internet and Higher Education*, 13(1-2), 45-51.
- Napier, N.P., Dekhane, S. & Smith, S. (2011). Transitioning to blended learning: Understanding student and faculty perceptions. *Journal of Asynchronous Learning Networks*, 15 (1), 20-32.
- Nyquist, J.D. & Wulff, D.H. (1988). Consultation using a research perspective. In E.C. Wadsworth, (Ed.), *Professional and organizational development in higher education: A handbook for new practitioners*. Stillwater, OK: New Forums Press.
- Oblinger, D. & Oblinger, J.L. (2005). *Educating the net generation*. Boulder, CO: Educause.
- Ocak, M.A. (2011). Why are faculty members not teaching blended courses? Insights from faculty members. *Computers and Education*, 56(3), 689-699.
- O'Donoghue, T. (2007). *Planning your qualitative research project: An introduction to interpretivist research in education*. New York: Routledge.

- Onwuegbuzie, A.J., Dickinson, W.B., Leech, N.L., Zoran, A.G. (2009). A qualitative framework for collecting and analyzing data in focus group research. *International Journal of Qualitative Methods*, 8(3), 1-21.
- Palmer, P. (1997). *The courage to teach*. San Francisco: Jossey-Bass.
- Parkinson, D., Greene, W., Kim, Y., & Marioni, J. (2003). Emerging themes of student satisfaction in a traditional course and a blended distance course. *TechTrends*, 47(4), 22-28.
- Perry, W.G., (1970). Forms of intellectual and ethical development in the college years: A scheme. New York: Holt, Rinehart, and Wilson.
- Picciano, A.G. & Dziuban, C.D. (2007). *Blended learning: Research perspectives*. Needham, MA: Sloan Consortium.
- Pisutova-Gerber, K. & Malovicova, J. (2009). Critical and higher order thinking in online threaded discussion in the Slovak context. *International Review of Research in Open and Distance Learning*, 10(1). Retrieved from:
<http://www.irrodl.org/index.php/irrodl/article/view/589/1175>
- Pratt, D. & Collins, J. (2006). *Teaching perspectives inventory*. Retrieved from:
http://teachingperspectives.com/html/tpi_frames.htm
- Precel, K., Eshet-Alkalai, Y., & Alberton, Y. (2009). Pedagogical and design aspects of a blended learning course. *International Review of Research in Open and Distance Learning*, 10 (2), 22-39.

- Priluck, R. (2004). Web-assisted courses for business education: An examination of two sections of principals of marketing. *Journal of Marketing Education*, 26(2), 161-173.
- Punch, M. (1986). *The politics and ethics of fieldwork*. Beverly Hills, CA: Sage.
- Redmond, P. & Lock, J. V. (2006). A flexible framework for online collaborative learning. *The Internet and Higher Education*, 9(4), 663-678.
- Riffell, S. K., & Merrill, J. (2005). Do hybrid lecture formats influence laboratory performance in large, pre-professional biology courses? *Journal of Natural Resources and Life Sciences Education*, 34, 96-100.
- Riffell, S. K., and Sibley, D. H. (2003). Learning online: Student perceptions of a hybrid learning format. *Journal of College Science Teaching*, 32 (6), 394-399.
- Rourke, L., Anderson, T., Garrison, R.D. & Archer, W. (2001). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Asynchronous Learning Networks*, 5 (2), 3-19.
- Rourke, L. & Kanuka, H. (2009). Learning in communities of inquiry: A review of the literature. *Journal of Distance Education*, 23(1), 19-48.
- Rubin, H.J., & Rubin, I. (2005). *Qualitative interviewing: The art of hearing data* (2nd Ed.). Thousand Oaks, CA: Sage.
- Salomon, G. (2002). Technology and pedagogy: Why don't we see the promised revolution? *Educational Technology*, March-April 2002, 57-75.
- Schön, D. A. (1991). *The reflective turn: Case studies in and on educational practice*. New York: Teachers Press, Columbia University.

Sfard, A. (1998). On two metaphors for learning and the danger of choosing just one.

Educational Researcher, 27(2), p. 4-13.

Shea, P., Li, C.S., & Pickett, A. (2006). A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses.

Internet and Higher Education, 9, 175-190.

Shea, P.J. (2007). Towards a conceptual framework for learning in blended environments. In A. G. Picciano & C. D. Dziuban (Eds.), *Blended learning: Research perspectives* (pp. 19-35). Needham, MA: Sloan Consortium.

Research perspectives (pp. 19-35). Needham, MA: Sloan Consortium.

Shea, P., Hayes, S., Vickers, J., Gozza-Cohen, M., Uzuner, S. Mehta, R., Valchova,

A., Rangan, P. (2010). A re-examination of the community of inquiry

framework: Social network and content analysis. *Internet and higher education*,

13, 13-21.

Shea, P., Hayes, S., Smith, S.U., Vickers, J., Bidjerano, T., Pickett, A., Gozza-Cohen, M.,

Wilde, J., & Jian, S. (2012). Learning presence: Additional research on a new

conceptual element within the community of inquiry (CoI) framework. *Internet*

and Higher Education, 15, 89-95.

Short, J., Williams, E. & Christie, B. (1976). *The social psychology of*

telecommunications. London: John Wiley & Sons.

Skibba, K. (2005). How faculty use hybrid courses to facilitate adult learning.

Proceedings of the 24th Annual Midwest Research-to-Practice Conference in

Adult Continuing and Community Education, University of Wisconsin

Milwaukee.

- Snowball, J., & Mostert, M. (2008). Introducing a learning management system in a large first year class: The impact on lecturers and students. *Social Science Research Network*. Retrieved from <http://ssrn.com/abstract=1294924>
- So, H.J. & Brush, T.A. (2008). The content analysis of social presence and collaborative learning behaviors in a computer-mediated learning environment. In C.K. Looi, D. Jonassen, & M. Ikeda (Eds.), *The 13th Annual Conference on Computers in Education* (pp. 413-419). Amsterdam: IOS Press.
- Stacey, E. & Wiesenbergs, F. (2007). A study of face-to-face and online teaching philosophies in Canada and Australia. *Journal of Distance Education*, 22 (1), 19-40.
- Starenko, M., Vignare, K. & Humbert, J. (2007). Enhancing student interaction and sustaining faculty instructional innovations through blended learning. In A.G. Picciano and C.D. Dziuban, (Eds.), *Blended learning: Research perspectives*. Needham, MA: Sloan Consortium.
- Stewart, D., Shamdasani, P., & Rook, D. (2007). *Focus groups: Theory and practice*. 2nd ed. London: Sage.
- Stirling, J., Hopkins, K. & Riddick, B. (2010). Digital integrity and the teaching/learning nexus: Taking the pedagogical pulse of the multi-location university. *International Journal for Educational Integrity*, 6(2), 50-63.
- Stokamer, S. (2011). Modeling citizenship: The nexus of knowledge and skill. In S.M. Cress and D.M. Donahue, (Eds.), *Democratic dilemmas of teaching service-learning: Curricular strategies for success*. Sterling, VA: Stylus.

- Swan, K. & Ice, P. (2010). The community of inquiry framework ten years later: Introduction to the Special Issue. *Internet and Higher Education*, 13, 1-4.
- Swan, K. & Shih, L.F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks* 9(3): Retrieved from:
http://www.sloanc.org/publications/jaln/v9n3/pdf/v9n3_swan.pdf.
- Tisdell, E.J. (1993). Feminism and adult learning. *New Directions for Adult and Continuing Education*, 57, 91-103.
- U.S. Department of Education, Office of Planning, Evaluation, and Policy Development (2010). *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies*, Washington, D.C., 2010.
- Usher, R. & Edwards, R. (1994). *Postmodernism and education*. New York: Routledge.
- Vaughan, N. (2004). Investigating how a blended learning approach can support an inquiry process within a faculty learning community. (Unpublished doctoral dissertation.) Retrieved from Proquest Dissertation Publishing. (ID 932372171)
- Vaughan, N.D. (2007). Perspectives on blended learning in higher education. *International Journal on E-Learning*, 6(1), 81-94.
- Vignare, K. (2007). Review of literature on blended learning: Using ALN to change the classroom – will it work? In A.G. Picciano and C.D. Dziuban, (Eds), *Blended learning: Research perspectives*. Needham, MA: Sloan Consortium.

- Vrasidas, C. (2000). Constructivism vs. objectivism: Implications for interaction, course design, and evaluation in distance courses. *International Journal of Educational Telecommunications*, 6(4), 339-362.
- Walker, D. (2002). Constructivist leadership: Standards, equity and learning - weaving the whole cloth from multiple strands. In L. Lambert (Ed.), *The constructivist leader*. New York: Teachers College Press.
- Wallace, L. & Young, J. (2010). Implementing blended learning: Policy implications for universities. *Online Journal of Distance Learning Administration*, 8(4).
Retrieved from
http://www.westga.edu/~distance/ojdla/winter134/wallace_young134.html.
- Weimer, M.E. (2010). *Inspired college teaching: A career-long resource for professional growth*. San Francisco: Jossey-Bass.
- Welch, R. (2007). Educational equivalency. In A.G. Picciano and C.D. Dziuban, (Eds), *Blended learning: Research perspectives*. Needham, MA: Sloan Consortium.
- Wilkerson, L. (1988). Classroom observation: The observer as collaborator. In E.C. Wadsworth, (Ed.), *Professional and organizational development in higher education: A handbook for new practitioners*. Stillwater, OK: New Forums Press.
- Woods, R., Badzinski, D.M., & Baker, J. (2007). Student perceptions of blended learning in a traditional undergraduate environment. In A.G. Picciano and C.D. Dziuban, (Eds), *Blended learning: Research perspectives*. Needham, MA: Sloan Consortium.

Wu, D. & Hiltz, S. R. (2004). Predicting learning from asynchronous online discussions.

Journal of Asynchronous Learning Networks. 8 (2), 139-151.

Xin, C., & Feenberg, (2006). Pedagogy in cyberspace: The dynamics of online discourse.

Journal of Distance Education, 21 (2), 1-25.

Young, J.R. (2002). Hybrid teaching seeks to end the divide between traditional

and online instruction. *Chronicle of Higher Education*, p. A33.

Ziegler, M., Paulus, T. & Woodside, M. (2006). Creating a climate of engagement in a

blended learning environment. *Journal of Interactive Learning Research*, 17 (3),

295-318.

Zinn, L. M. (2004). Exploring your philosophical orientation. In M. W. Galbraith

(Ed.), *Adult learning methods: A guide for effective instruction* (3rd ed.).

Malabar, FL: Krieger Publishing Co.

Appendix A:

Invitation to Participate in Hybrid Study

Understanding the Role of Social, Teaching and Cognitive Presence in Hybrid Courses:
Student Perspectives on Learning and Pedagogical Implications

Dear [*prospective instructor's name*]:

As you are aware, I collected midcourse assessment data in your hybrid course as part of the AIM: Hybrid Course Conversion Series. At the time of data collection, you and your students were informed that analysis of data would consist of (1) a summary report sent to you, and (2) a cross-course analysis of hybrid assessment data to learn about students' experiences in the hybrid format. Since that time, I have proposed a study utilizing hybrid course assessment data, and I am writing to request that the data from your hybrid course be included in the project.

I now have the opportunity to conduct a secondary analysis of hybrid course assessment data as part of my doctoral dissertation in educational leadership. Specifically, I am conducting an exploratory study to better understand the role of social, teaching and cognitive presence connected to students' perspectives on learning in hybrid settings. I would like to include the data from your course as part of this study. I hope that the findings from this study will help us to better understand students' experiences in hybrid settings, as well as pedagogical implications for teaching hybrid courses.

If you agree to include your course feedback data as part of the study, I assure you that no information connected to your identity or the identity of your course will be included in the report. Rather, broad themes across multiple courses will be reported. Any information that is obtained in connection with this study and that can be linked to you or identify you will be kept confidential. Further, I intend to send a preliminary report of major findings to all participating faculty for your review. This report will be sent to each participant individually to ensure confidentiality.

As was the case during the AIM Hybrid Series, your participation is entirely voluntary. Your decision to participate or not will not affect your relationship with the researcher or with the Graduate School of Education at Portland State in any way. If you decide to take part in the study, you may choose to withdraw at any time without penalty. To confirm your participation or to decline participation, please contact the researcher directly at voegelej@pdx.edu.

If you have concerns or problems about your participation in this study or your rights as a research subject, please contact the Human Subjects Research Review Committee, Office of Research and Sponsored Projects, 600 Unitus Bldg., Portland State University, (503) 725-4288 / 1-877-480-4400. If you have questions about the study itself, contact Janelle Voegelé (503) 725-8341. The faculty dissertation advisor for this study is Dr. Christine Cress, (503) 725-4682. Sincerely,

Janelle Voegelé
Assistant Director of Teaching, Learning and Assessment
Portland State University

Appendix B:**Small Group Instructional Diagnosis Question Protocol****Hybrid Course Feedback*****No names on this form please!***

Your instructor would like some feedback on how the course is going so far. Your participation is voluntary, and responses are completely anonymous. Feedback from this course will be sent in a summary report directly to your instructor. In addition, feedback may be compared across multiple courses in the future to better understand students' experiences in hybrid settings.

Directions: Together with your group, please respond to the following questions. One group member will use this sheet to write the group's responses below. During your discussion, the group's note taker will:

- (1) Write down your group members' own words, as agreed upon by the group.***
- (2) Set time aside at the end of each question for those who have not yet responded (including the note taker).***
- (3) Check notes with the group to ensure that they are accurate from the group's point of view. Please call the facilitator(s) to your group when you are finished.***

ADDITIONAL PAPER MAY BE USED FOR RESPONSES, IF NEEDED.

- (1) What about this course is helping you to learn? (Please comment on the face-to-face and online portions of the course)

(2) What about this course could be changed? (Please comment on the face-to-face and online portions of the course)

(3) What specific suggestions do you have to bring about those changes?

Appendix C:

Social, Teaching and Cognitive Presence Coding Matrix

Social, Teaching and Cognitive Presence Coding Matrix

CoI Elements	Categories	Indicators (examples)
Social Presence	Open Communication	Enabling risk-free expression Comfortable conversing in class and online Comfortable interacting with other course participants
	Group Cohesion	Discussions and activities encouraging collaboration Comfort with expressing one's opinion and listening to others Sense of trust and effective intergroup communication
	Affective/personal	Expressing emotions and camaraderie Sense of belong to a course community Face to face and online formats are both comfortable environments for interacting and self-expression
Teaching Presence	Design and organization	Developing curriculum and methods Communication of course goals, methods, topics
	Facilitation of discourse	Expectations for participation Sharing personal meaning Actions reinforcing development of community
	Direct instruction	Facilitation of engagement in dialogue and exploration Facilitation of focus on task and relevant issues Timely feedback Evaluation of strengths and weaknesses
Cognitive Presence	Triggering	Environment facilitates problem-based approach Environment facilitates curiosity Environment stimulates motivation

Exploration	Using a variety of resources to explore problems posed Exploration of relevant information Collaborative exploration of content Appreciation of diverse perspectives
Integration	Using information to answer questions Learning activities that assist in constructing answers/solutions Sustained critical reflection within a discourse community
Resolution	Testing and applying knowledge Application of solutions to practice Application of knowledge creation to other contexts

Appendix D:
Pedagogical Roles Framework

Instructor Roles	Description	Examples of components
Pedagogical	Design and teach the course	Design of the course structure, creation of learning activities, integrating face-to-face and online activities, teaching strategies (facilitating discussion, lecturing, group projects, online media presentations, etc), provide resources, offer guidance and feedback, ask questions, conduct assessment and evaluation
Social	Develop a community of learners	Personalize communication, provide timely guidance, build a climate of trust, provide social guidelines, display empathy, humanize instructor-student interactions, facilitate student-student interaction, use humor
Managerial	Oversee course structure and coordinate tasks	Schedule activities and class meetings, set due dates, coordinate assignments, assign group and student roles, present clear expectations and instructions, manage grading, and clarify course policies
Technological	Manage and support course technology	Utilize a course management system to organize course content and learning activities, assist students with technology issues, orient students to course technology