

PROFESSING ON THE SCREEN: THE SUBJECTIVE DIMENSIONS OF PROFESSORS'
EXPERIENCES LEARNING TO TEACH DIGITALLY-MEDIATED COURSES

By

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ABSTRACT

PROFESSING ON THE SCREEN: THE SUBJECTIVE DIMENSIONS OF PROFESSORS' EXPERIENCES LEARNING TO TEACH DIGITALLY-MEDIATED COURSES

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This research study utilizes grounded theory to explore how professors at a single research university learn to teach digitally-mediated courses. The study focuses on what learning means to them subjectively, within their professional lives. I explored the specific activities, qualities of social interactions, and intersecting contexts that support professors as they learn to teach digitally-mediated courses. I utilize a definition of learning informed by sociocultural theory and advanced within the communities of practice literature, defining it as “the interplay of experience and competence” (Wenger, 1999, p. 50) This study draws needed attention to the subjective dimensions of the technological transformations of our time, particularly how they are reshaping academic work and the human relationships vital to learning.

The study demonstrates how new technologies not only change the practices of academic teaching; the changing practices affect professors' experience of teaching itself. The proposed framework outlines three dimensions of experience the professors in the study inevitably confronted when teaching digitally-mediated courses:

The *engagement in work* explores the physical interactions of digitally-mediated teaching. Professors engage physical objects and settings in creating a teaching experience; this dimension provides insight into how the aesthetic qualities of the immediate environment affect professors' digitally-mediated teaching experiences.

The *engagement of one's self* dimension explores the personal meanings of digitally-mediated teaching. Professors express distinct dispositions, goals, and histories in creating a

teaching experience; this dimension provides insight into how individual differences affect professors' digitally-mediated teaching experiences.

The *engagement with others* dimension explores the social bonds of digitally-mediated teaching. Professors encounter alive, biographical, creative human beings in creating a teaching experience; this dimension provides insight into how a sense of relatedness to others affects professors' digitally-mediated teaching experiences.

Professors' experiences are multiple, interrelated, and unfold over time. The framework proposed by this study allows an exploration of how digitally mediated teaching affects professors' academic identities as constructed through evolving life stories. Consequently, it emphasizes how a professor's evolving history of interactions along the three dimensions shapes the personal meanings each brings to her or his own practice. It emphasizes the development of functional relationships, not the integration of different types of knowledge, as a central feature of professional growth. It views engaging the tensions digitally-mediated teaching presents as the primary means of supporting professors' professional growth.

I conclude by reflecting on the manifest and latent functions of academic courses. I argue that, although the manifest functions of digitally-mediated academic teaching give courses their recognizable forms, their latent functions give courses their meaning. To explore the latent functions of academic courses, I examine dynamic processes inherent in professors' and students' relationships with themselves, their relationships with each other, and their engagement in meaningful work.

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DEDICATION

To Ali, Anna, and Jack

“Og hér ert þú Glósóli.....”
Glósóli by Sigur Ros

ACKNOWLEDGEMENTS

The African ethic of *ubuntu* reminds us, “I am what I am because of who we all are.” I painstakingly typed each word in this dissertation; my life, however, has been authored in the company of mentors, friends, and strangers. My life, as Martin Luther King, Jr. said, is interwoven with the lives of others “in a single garment of destiny.” This dissertation, then, is not something I wrote alone; it is, instead, an opus of the voices, perspectives, and people whose have shared life with me.

I have been heartened by the company of mentors and friends throughout my doctoral education. Dr. Ann Austin, my advisor and colleague, exemplifies the heart of a scholar. She inspires me to mentor others with the same generous spirit she has shown me. (She also taught me how to evade a lion if it attacks your car on a safari, but that’s a longer story). Dr. Roger Baldwin’s encouragement enlivened my inner teacher. Dr. Cary Roseth is a kindred spirit whose well of understanding, gentle sense of humor, and kindness has allowed us to become both colleagues and friends. Dr. John Dirkx created a quiet enough space so this research project could bubble to the surface from the depths of my heart. Mentors are the ones who help us *find our own minds*; I am grateful to have been in the company of such capable ones.

My high school English teacher, Julie Stewart, still reminds me that “teaching is not just a pouring out, it’s a pouring in” every time I read her hand-written note. Her words mean more to me now than they did at seventeen (and they meant a lot then). I am grateful to David Thomsen, my dear friend, whose simple encouragement to “share my heart” led me to consider what was in my heart to share. Chris Thurman encouraged me to live authentically, offering the hand of a friend guiding me towards ground on which it is safe to stand. Diane Doberneck brings out a spirit of play and curiosity in me that I hope will always pervade my work. I am also thankful to

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My father, Coleman Glass, is a prudent investor; his best investments have been in his family, our education, a cherry red 1991 Ford Probe, and the Apple //e he purchased for me in fourth grade. My mother, Dorothy Glass, dedicated her life to education as a teacher and an elementary school principal. She planned unforgettable summer vacations to everywhere from the Grand Canyon to Colonial Williamsburg; such experiences nurtured my love for discovery, history, and travel. My sister, Beth Primm, beckons me to live with compassion each day, towards everyone, including my own quirks, foibles, and follies. My “little” sister, Kimberly Glass, has helped me ask the “big” questions of who we are, where we're going, and what dangerous questions will be necessary to ask if we really want to get there. My father and mother-in-law, Bruce and Pam Jordahl, as well as Tammy Isley and Marty Berger, have always believed in me, offering kindness and support. My extended family, Karen Rogers, the Euscher family, the Cummings family, and the Primm family, have also cheered for my success.

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I have shared life among a company of mentors, family and friends who have provided laughter, warmth, and intimacy. My life has also been enriched, however, by a company of strangers. I pass by this company of strangers each day; I do not know their stories, or even their names, even though their lives are part of my own. Life is a journey that takes us along side roads and dirt roads; the slower, more meandering paths take you to places that well-planned superhighways simply cannot. Whatever each day brings, or how many days my journey lasts, I am most grateful to have traveled in such good company.

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CHAPTER 1: INTRODUCTION AND PROBLEM STATEMENT

In this study, I explore what it means for university professors to pursue their own learning in relation to their understanding of effective digitally-mediated teaching. Research on the relationship of digitally-mediated teaching with academic workload (Crews, Wilkinson, Hemby, & McCannon, 2008; Sheridan, 2006; Amiel & Orey, 2006), faculty satisfaction (Wasilik & Bolliger, 2009), work-life balance (Heijstra, 2010; Hardy & Bower, 2004), and faculty support (Puzziferro & Shelton, 2009; Hager & Clemmons, 2010; Diaz et al., 2011) has certainly contributed to our understanding of how digitally-mediated teaching impacts academic work. However, the increasing proportion of digitally-mediated courses is rarely discussed in terms of the professor's own learning. A focus on professors' learning draws needed attention to the subjective dimensions of the technological transformations of our time, particularly how they are reshaping academic work and the human relationships critical to learning. Such perspectives are vital if universities are to negotiate these transformations in ways that not only "support" the faculty members who teach at their institutions, but provide robust and meaningful opportunities for learning and professional growth.

I believe the exponential increase in the number of digitally-mediated courses (Allen & Seaman, 2010a, 2010b) and increasing proportion of college students who grew up with technology and the Internet (Weigel, James, & Gardner, 2009; Glenn, 2008; Davidson & David, 2010) should be matched by an equally deep qualitative analysis examining how professors learn to teach digitally-mediated courses through the everyday activities, relationships, and contexts of their work. Thus, this research study focuses on the professor herself and how she pursues her own learning in relation to her understanding of effective teaching in her discipline or field.

Policymakers often frame the move to digitally-mediated instruction as a means to reduce cost, increase access, or enhance quality (Finkelstein, Frances, Jewett, & Scholz, 2000; Harley, 2002, 2001; Pfeffer, 2003). Perspectives of faculty learning are largely absent in existing research on the rapid expansion of digitally-mediated learning initiatives. In addition, the conversation often lacks an exploration of digitally-mediated learning within the context of the subjects professors strive to teach and learn (Neumann, 2009a). The emphasis on faculty learning in this study allows academic administrators and educational researchers to understand how professors learn to teach digitally-mediated courses from the point-of-view of professors themselves. This perspective will increase our understanding of the particular activities, qualities of social interactions, and intersecting contexts of academic work that support professors learning to teach digitally-mediated courses. I hope this dissertation broadens the conversation about the expansion of digitally-mediated instruction to incorporate the lived experiences of professors themselves as they engage in this form of academic work.

In this research study, I examine the experiences of 16 professors at one major public research university. Through the analysis of semi-structured interviews, documents (e.g., teaching statements), course feedback, course materials, and syllabi, this study contributes new perspectives on how university professors who teach digitally-mediated courses learn about this form of academic work within the context and goals of teaching in their discipline or field. This study contributes to theory development and professional practice in two significant ways. First, this dissertation contributes to theory development by examining faculty learning within a specific form of academic work. It contributes to a growing body of research on faculty professional growth (O'Meara, Terosky, & Neumann, 2008) as well as to conceptualizing digitally-mediated teaching from a perspective of faculty learning and professional growth

(Lattuca & Creamer, 2005; Neumann, 2009). Second, this study contributes to practice by constructing specific recommendations for how higher education institutions may “organize for learning” (Ewell, 1997, p. 3) in support of faculty members’ efforts to learn to teach digitally-mediated courses. Deepened understanding of their own learning from professors’ points-of-view could inform new forms of organizational support and professional development to enhance professors’ learning.

Statement of the Problem

Academic teaching is a “complex and unfolding human endeavor” (O’Meara, Terosky, & Neumann, 2008, p.171). The practices of academic teaching are changing dramatically with the advent of digital technology (Brown, 2006; EDUCAUSE, 2010; Glenn, 2008; Hartman, Dziuban, & Brophy-Ellison, 2007; Staley & Trinkle, 2011). Increasing numbers of professors are teaching digitally-mediated courses and more academic programs are being offered with both face-to-face and virtual components (Allen & Seaman, 2010a, 2010b; Davidson & David, 2010; Glenn, 2008; Oh, 2007). Given both the rapid expansion of knowledge and new forms of digital communication, teaching digitally-mediated courses involves, not only increased workloads as measured in hours worked (Crews et al., 2008; Sheridan, 2006; Amiel & Orey, 2006), but also a dramatic escalation of the “learning load” (Neumann, 2009a, p. 17) for professors who make sense of the rapid advancements in their fields and new digital mediums for teaching. This study focuses on professors’ points-of-view of what it means to learn about this form of academic work within the context and goals of teaching in their discipline or field.

The rapid evolution of new digital technologies directly impacts university professors (Baldwin, 1998), but it does not affect all faculty members equally (Brown & Adler, 2008; Hartman et al., 2007). New technologies designed to assist learning include course management

systems, new tools for knowledge representation (podcasting, multimedia presentations, digital storytelling, web mapping, digital textbooks), synchronous and asynchronous computer-mediated communication (e.g. VoiceThread, Skype), web 2.0 (wikis, blogs, social bookmarking, social networking, virtual collaboration tools), open educational resources (e.g. Merlot), disciplinary-specific technologies for teaching (teaching writing, language, cultures, and sciences), and new digital devices (e.g. smart phones and tablet computers) (Bass, 2011; Veletsianos, 2010; Wenger, White, & Smith, 2010).

As digital technology mediates more aspects of academic teaching, professors must engage in ongoing learning (Groves & Zemel, 2000; Okojie & Olinzock, 2006; Schuster & Finkelstein, 2008). Faculty members report that teaching digitally-mediated courses changes the way they design courses, organize their time, interact with students, and approach teaching (Major, 2010). New technologies not only require digital literacy, but often also necessitate that professors rethink core pedagogical issues (Garrison, Anderson, & Archer, 2010; Mishra & Koehler, 2006). In other words, professors must not only understand how to use emerging technologies, they must also align specific technologies with pedagogical goals to design meaningful learning experiences (Mishra, Koehler, & Zhao, 2007). Professors make inherently creative decisions regarding unique and innovative ways to use these technologies to achieve the learning objectives in their courses (Parrish, Wilson, & Dunlap, 2010).

Little research exists about how professors themselves learn to teach digitally-mediated courses. While some literature describes specific faculty development initiatives (Mishra et al., 2007), to date, little research has explicitly examined the subjective experiences of professors learning about this form of academic work (Dirkx, 2009).

Definitions

This research study explores professors' learning in relation to their understanding of effective teaching in their discipline or field. It uses terms that may be defined in a multitude of ways. Although I elaborate on the meaning of terms throughout this dissertation, this section provides key definitions that are central to the construction of this study.

Learning. The current study utilizes a definition of learning informed by sociocultural theory and advanced within the communities of practice literature, defining it as “the interplay of experience and competence” (Wenger, 1999, p. 50). Learning, from this perspective, is not merely acquiring knowledge, mastering teaching techniques, or developing technical skills; it involves becoming the kind of person for whom the interplay of experience and competence creates meaningful ways of participating in a community (Wenger, 2010).

Professors as learners. The situated perspectives on which the present study draws stress that learning is bound by the opportunities and values presented through social interaction (Greeno, 1998; Lave & Wenger, 1991; Rogoff, 1990). Professors' learning is intertwined with their particular activities, the qualities of their social interactions, and the intersecting contexts of their work (Lattuca & Creamer, 2005; Lattuca, 2002, 2005; Neumann, 2005, 2009a; O'Meara et al., 2008). Proponents of situated perspectives on learning believe all learning is situated (Greeno, 2006), therefore, following Sawyer and Greeno (2009), this dissertation refers to situated perspectives rather than to situated learning to avoid suggesting that there are forms of “non-situated” faculty learning.

Research Questions

The research question guiding this study is: *From these professors' points-of-view, what does it mean to learn to teach digitally-mediated courses within the context and goals of teaching in their field of study?* I explore this main question through four subquestions:

1. What do professors experience as they transition from teaching face-to-face courses to teaching digitally-mediated courses?
2. From these professors' points-of-view, how did they learn personally meaningful digitally-mediated teaching practices?
3. How do professors describe learning to teach digitally-mediated courses within particular departments and colleges within the university?
4. How do professors describe effective pedagogical practice in teaching digitally-mediated courses?

Purpose Statement

The pervasiveness of new digital technologies for teaching is changing how faculty go about their work (Bass, 2011). The purpose of this study is to understand the situated dimensions of how university professors learn about teaching digitally-mediated courses within the context and goals of teaching in their disciplines or fields. I take a grounded theory approach relying on document analysis and interviews with 16 professors working at a single Carnegie Doctoral/Research University (Very High Research Activity), spanning diverse disciplines and fields including the social sciences, sciences, humanities and applied/professional fields. Grounded theory allows an exploration of professors' learning in the context of their own life and work. It provides needed perspective on the subjective dimensions of digitally-mediated teaching, particularly how technology is reshaping academic work and the human relationships

vital to learning. Through the analysis of interviews, along with teaching statements, course feedback, and syllabi, this study contributes to knowledge about how university professors learn in relation to their understanding of effective teaching. It contributes to a small –but growing – body of research on faculty learning and professional growth. This dissertation concludes with recommendations for new forms of organizational support and professional development.

Statement of Significance

How university professors pursue their own learning in relation to their understanding of effective digitally-mediated teaching is significant for several reasons:

This research is significant from a political and economic standpoint. Enrollment in digitally-mediated courses is growing exponentially. In 2008, over 4.6 million students enrolled in at least one digitally-mediated course, an increase of 21% from the previous year and far exceeding the 2% increase in regular enrollment (Allen & Seaman, 2010b). There are few signs this trend will reverse. One significant impediment to the expansion of digitally-mediated courses includes professors' own reservations about this form of academic work (Wilson & Magid, 2009b). It is critical that the dramatic rise in the number of digitally-mediated courses is equaled with a careful, rigorous, scholarly examination of how professors learn about this form of academic work. Yet, the conversation has largely been framed not by professors at research universities but from the perspectives of technologists, policymakers and administrators (Wilson & Magid, 2009a; Harley, 2002, 2001; Pfeffer, 2003), or faculty who teach digitally-mediated courses at for-profit institutions or community colleges (Hardy & Bower, 2004). Faculty devote energy to activities that are personally meaningful (Blackburn & Lawrence, 1995). This research study invites professors' perspectives and voices in the expansion of digitally-mediated instruction at public research universities.

This research is significant from a practical standpoint. Higher education is in the process of hiring a significant number of professors to replace retiring faculty (Austin, 2002a, 2002b; Gappa, Austin, & Trice, 2007; Schuster & Finkelstein, 2008). The next generation of professors' academic lives will involve roles and responsibilities quite different from current ones (Austin, 2002a, 2002b), including teaching more digitally-mediated courses (Allen & Seaman, 2010b; Wilson & Magid, 2009b). The expansion of digitally-mediated instruction may involve the unbundling of faculty roles (Neely & Tucker, 2010; Paulson, 2002; Plater, 2008), necessitating shifts in the skills necessary for teaching, as well as shifts in doctoral student preparation (Plater, 2008) and for faculty in the mid-and late-stages of their careers (Hartman et al., 2007). Campus administrators have been called to understand what motivates faculty to teach digitally-mediated courses (Wilson & Magid, 2009b; Oh, 2007). This dissertation contributes to higher education scholars' understanding of faculty perspectives related to learning and professional growth while informing campus leaders' decisions to meet demands for digitally-mediated instruction.

This research is significant from a policy standpoint. A number of highly-selective, internationally ranked American research universities, such as the University of California at Berkley, have made significant investments in digitally-mediated instruction in an effort to move some or all of their general education courses online (Keller & Parry, 2010). Although online courses are common at community colleges and for-profit institutions, and research universities such as MIT and Yale have published non-credit open courseware, recent changes mark a significant departure from the past. Such efforts mark the first time that American research universities have shown serious movement towards developing fully online for-credit degree programs without creating a separate organizational entity (e.g. Penn State's World Campus).

This research is significant for the field of higher education research. Given the persistent expansion of the boundaries of academic work (Gappa, Austin, & Trice, 2005), it is critical for research to take an explicit focus on faculty professional growth (O'Meara et al., 2008). There is a need for research designs that explore professors' experiences of the subject matter they teach and learn, particularly qualitative research that engages in the study of teaching and learning within the contexts of professors' disciplines or fields (Neumann, 2009a). Policymakers and administrators see the lower overhead costs of digitally-mediated instruction as a promising solution to the myriad problems facing cash-strapped higher education institutions (Harley, 2001, 2002). Higher education researchers have framed digitally-mediated learning in the language of the global delivery of educational programs, including both traditional higher education institutions and new providers i.e., multinational corporations (Knight, 2007). While these perspectives draw our attention to the financial benefits of expanding the number of online courses, we cannot assume professors necessarily see online learning the way policymakers, technologists, and higher education researchers do (Wilson & Magid, 2009b).

Finally, this research is significant from a humanistic standpoint (Nussbaum, 1998; Palmer, 1998). If academic teaching is a "complex and unfolding human endeavor" (O'Meara et al., 2008, p. 171) then it is imperative to examine the perspectives of professors who teach digitally-mediated courses. Opportunities for learning and professional growth are key features of faculty members' career development and satisfaction (Austin & Gamson, 1983; Blackburn & Lawrence, 1995; Hagedorn, 2000). Although a large body of research looks at learning outcomes of students in digitally-mediated courses, little information exists about how faculty themselves learn about teaching digitally-mediated courses. If learning is central to professors' career development and satisfaction (Blackburn & Lawrence, 1995), it is imperative to consider the

contexts that promote it in conversations about the expansion of digitally-mediated learning (Bolliger, 2009; Wasilik & Bolliger, 2009). It is necessary to document a variety of meaning-laden forms of contemporary academic work (Dirkx, 2009; Neumann, 2009b), including particular activities, qualities of social interactions, and contexts that support professors learning this emerging dimension of academic work.

Dissertation Structure

This dissertation contains five chapters. The purpose of this chapter is to present the statement of the problem and position the research questions within a problem statement while highlighting the potential relevance of the research. Chapter 2 provides the background literature informing the study. It reviews literature on faculty as learners and literature on situated perspectives of learning. Chapter 3 outlines the specifics of the methodological approach and the research design. In Chapter 4, the results of the study are presented and Chapter 5 provides a discussion of the results and implications for practice and further research.

CHAPTER 2: REVIEW OF LITERATURE

The primary focus of this study is how professors learn to teach digitally-mediated courses; its particular focus is what this learning means to them subjectively, within their professional lives. The study explores the activities, qualities of social interactions, and intersecting contexts that support professors as they learn about digitally-mediated teaching. This section outlines the conceptual framework used in the design of this dissertation. The conceptual framework places the self of the professor in relation to three dimensions of learning: engaging in meaningful, goal-directed activities; social interactions with colleagues; and adapting to intersecting, evolving contexts. The final section connects two issues relevant to effective digitally-mediated teaching to the conceptual framework: integrating technology and online presence.

Professors as Learners

Learning is central to human identity (Wenger, 1999) and integral to academic work (Neumann, 2005, 2009a). The meaning of learning is central to the conceptualization of this study. To provide an understanding of the meaning of learning used in the current dissertation, this section offers a definition of learning drawn from literature on communities of practice (Wenger, 1999). It then it outlines four dimensions of faculty learning from a situated perspective (Barab & Duffy, 2000; Barab & Roth, 2006) and faculty learning and professional growth perspective (O'Meara et al., 2008) and then connects both to the conceptual framework used in this dissertation.

In recent years, higher education researchers have encouraged a renewed emphasis on institutional qualities that encourage faculty development (Gappa et al., 2005, 2007) and focus on faculty learning and professional growth (O'Meara et al., 2008), with an explicit emphasis on

faculty learning as a core aspect of professional growth (Lattuca & Creamer, 2005; Neumann, 2005, 2009a; O'Meara et al., 2008). The current study utilizes a definition of learning informed by sociocultural theory and advanced within the communities of practice literature, defining it as “the interplay of experience and competence” (Wenger, 1999, p. 50). Learning, from this perspective, is not just acquiring knowledge, mastering teaching techniques, or developing technical skills. Evolving expertise brings a change in the form of participation in a community of practice (Goodnow, 2001; Lave & Wenger, 1991; Wenger, 1999, 2010). Thus, learning is not just a cognitive activity separated from the social world (Gauvain, 2000; Rogoff, 1990; Wertsch, 1998; Rogoff, 2006); it involves all aspects of human experience, where participants’ identities evolve as they seek meaning through active social participation in a community (Bruner, 1990; Lave, 1991; Vygotsky, 1978).

Advancements in theory and research over the past few decades have generated profound shifts in how educational researchers understand human learning, challenging dualities that divorce persons from their contexts, individuals from their cultures, and the human mind from embodied activities (Bransford et al., 2004; Clancey, 2008; Gallagher, 2008; Overton, 2006). Situative perspectives on learning draw from anthropology, sociology, information sciences, computer science, and educational psychology (Sawyer & Greeno, 2009). Learning, understood in relation to the particular contexts of human activity, is a central tenet of situated perspectives on learning (Brown et al., 1989; Greeno, 1998; Lave & Wenger, 1991; Wenger, 1999). From a situated perspective, learning occurs as a function of human activities, relationships and contexts simultaneously (Barab & Roth, 2006; Barab & Duffy, 2000). Lave and Wenger (1991) described this mutual influence as situated social practice, arguing that “learning, thinking, and knowing

are relations among people engaged in activity in, with, and arising from the socially and culturally structured world” (p. 67).

Table 2.1 outlines the relationship between a situated perspective on learning (Barab & Duffy, 2000; Barab & Roth, 2006), a faculty professional growth perspective (Neumann, 2005, 2009a; O’Meara et al., 2008), and the conceptual framework of this dissertation.

A situated perspective on learning stresses knowing in the context of meaningful participation in human activities (Kaptelinin & Nardi, 2009), over knowledge as a thing people acquire (Bruner, 1990; Barab & Duffy, 2000; Barab & Roth, 2006). Likewise, a faculty professional growth perspective prioritizes the process through which professors learn through the varying activities of academic work and throughout their careers (Marsick & Watkins, 2001; Neumann, 2009a; O’Meara et al., 2008; Dewey, 1933; Schon, 1983, 1987). Although research, teaching, and service are terms used to describe the work of professors, individual professors exhibit distinct patterns of engaging in these activities. Learning sometimes “demands an effort; sometimes it is not even our goal. But it always involves who we are, what we do, who we seek to connect with, and what we aspire to become” (Wenger et al., 2010, p. 4).

A situated perspective on learning stresses knowing as reciprocally constructed through social interaction (Barab & Duffy, 2000; Barab & Roth, 2006). Likewise, a faculty professional growth perspective stresses both the personal and collective nature of faculty learning (Lattuca, 2002, 2005; Lattuca & Creamer, 2005; Neumann, 2005, 2009a). Professors may intentionally seek out collegial relationships, participate in regular faculty development programs, or form informal communities that support their learning (Rogoff, 1990; Wenger, 1999). They may also engage in collegial conversations or committee service that stimulate learning, even if they do not purposefully seek it out (Marsick & Watkins, 2001).

Table 2.1

The Relationship Between A Situated Perspective On Learning, A Faculty Professional Growth Perspective, And The Conceptual Framework Of This Dissertation

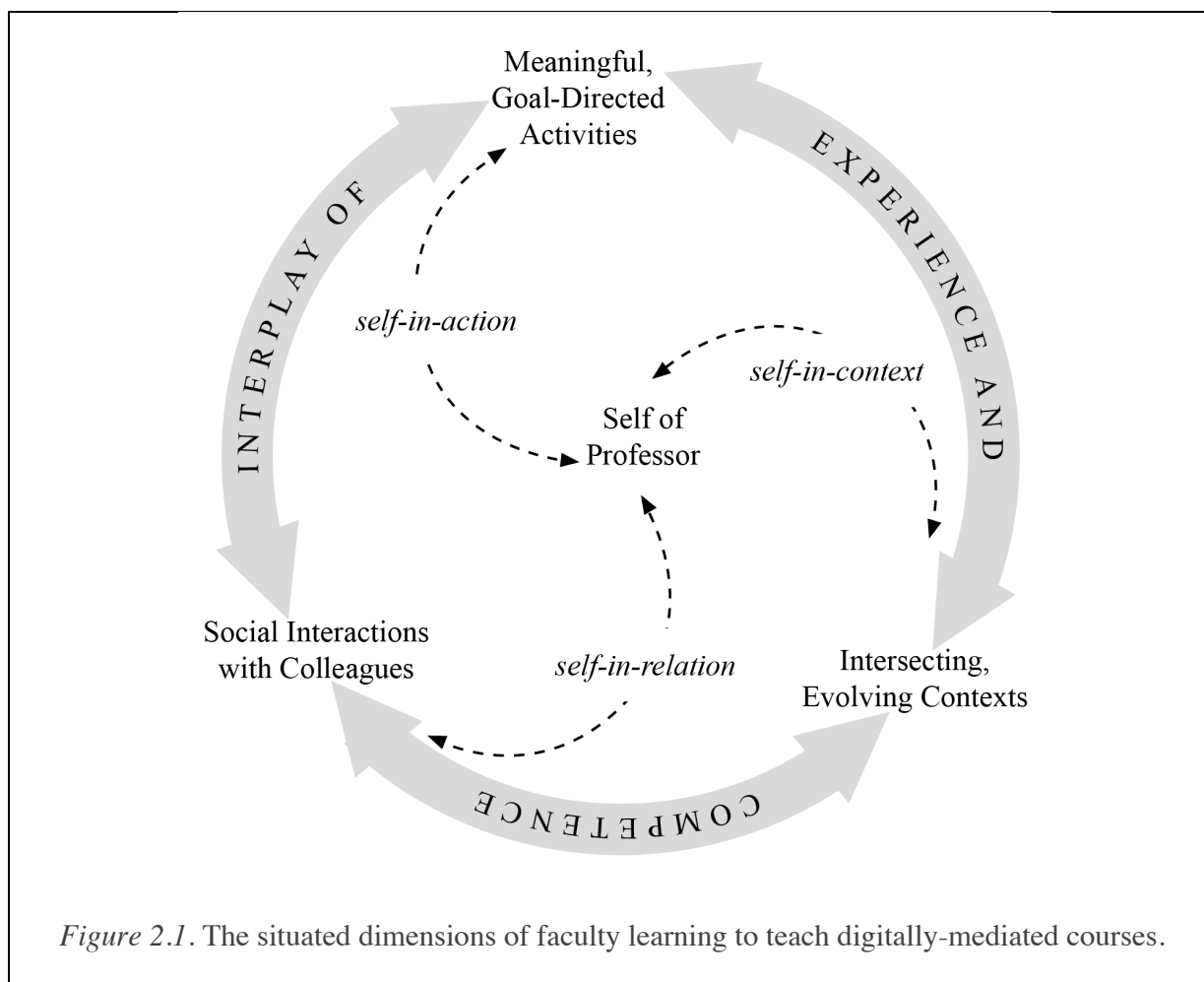
Situated Perspective on Learning (Barab & Duffy, 2000; Barab & Roth, 2006)	Faculty Professional Perspective (Neumann, 2005, 2009a; O'Meara et al., 2008)	Faculty Learning Teaching Online (Current Study)
Activities		
knowing is an activity, not a 'thing'	focusing professional energy on matters of personal meaning	faculty learn teaching online as they engage in meaningful, goal-directed activities
Relations		
knowing is reciprocally constructed in individual-environment interaction, not objectively defined or subjectively created	creating space, clearing out and building relationships and communities	faculty learn teaching online through social interactions with colleagues, both intentionally and incidentally
Contexts		
knowing is always contextualized, not abstract	connecting contexts, of work and life so as to enhance their scholarly learning while also gaining personally from it	faculty learn teaching online as they hold the tensions and contradictions of living in intersecting, evolving contexts
Interactions		
knowing is a functional stance on the interaction, not a 'truth'		faculty interactions (i.e., self-in-action, self-in-relation, and self-in-context) are related and mutually constitute each other over time

A situated perspective on learning stresses that knowing is embedded within specific sociocultural contexts (Gauvain, 2000; Rogoff, 1990; Wertsch, Del Rio, & Alvarez, 1995). Likewise, a faculty professional growth perspective views professors as “active participants in social environments that have accepted meanings and values that are not only learned but affect learning and what is learned” (Lattuca & Creamer, 2005, p. 4). Professors live simultaneously in multiple contexts that intersect and evolve, holding the tensions and contradictions of living in these multiple contexts.

A situated perspective on learning stresses the interactive nature of knowing (Baltes & Staudinger, 1996). The self of the professor is in medias res—in the middle of everything—actively negotiating meaning (Bruner, 1990; Mascolo & Fischer, 2010). It is also necessary to consider the dynamic relations among the dimensions (Mascolo & Bhatia, 2002; Rogoff, 1990). For example, it is not easy to explore faculty engaging in meaningful activities, without also considering with whom those activities are done, the person making meaning of the activities, and the contexts in which the activities take place. These interactions mutually constitute each other over time. The conceptual framework identifies three types of mutually constitutive relations that support professor’s learning: self-in-action, self-in-relation, and self-in-context. Understanding professors’ learning involves illuminating the changing patterns of activities, relations, and contexts over time. The focus is not on the distinct dimensions, but how developing competence brings a change in the form of a professor’s participation within a community over time (Goodnow, 2001; Wenger, 1999).

The conceptual framework used in the design of this dissertation places the self of the professor in relation to the three dimensions of learning outlined in this section: engaging in meaningful, goal-directed activities; social interactions with colleagues; and adapting to

intersecting, evolving contexts (Barab & Duffy, 2000; Barab & Roth, 2006). The conceptual framework specifies three dimensions of professors' learning as well as the ways these interactions mutually constitute each other over time. As a whole, these dimensions contribute to faculty learning, defined in this study as “the interplay of experience and competence” (Wenger, 1999, p. 50). Figure 2.1 illustrates the dynamic interaction of these three dimensions.



Situated Dimensions of Professors Learning To Teach Digitally-Mediated Courses

The conceptual framework used in the design of this dissertation places the self of the professor in relation to the three dimensions of learning outlined in the first section of this

chapter: engaging in meaningful, goal-directed activities; social interactions with colleagues; and intersecting, evolving contexts.

Meaningful, goal-directed activities. Professors learn to teach digitally-mediated courses as they engage in meaningful, goal-directed activities. Faculty learn through their work by engaging in research, teaching, and service in specific contexts (Dewey, 1933; Schon, 1983, 1987; Neumann, 2005, 2009a). Increasingly, faculty learning includes learning to teach digitally-mediated courses (Austin, 2002a, 2002b; O'Meara et al., 2008). What professors choose to pursue or not pursue at any given moment varies by what is meaningful to them (Blackburn & Lawrence, 1995). Learning to teach digitally-mediated courses involves professors striving to achieve goals (Kaptelinin & Nardi, 2009) more than learning a particular technology, e.g. a course management system or web 2.0 collaboration tool. This dissertation focuses on meaningful, goal-directed activities, i.e., interactions “initiated and carried out by the subject to fulfill its needs” (Kaptelinin & Nardi, 2009, p. 32). Such activities are not merely cognitive (Bruner, 1990); the choice of what activities to pursue may involve a professor’s “interests, emotions, hopes, passions, fears, and frustrations” as “powerful factors in choosing, learning, and using a technology” (Kaptelinin & Nardi, 2009, p. 78).

Faculty learning about digitally-mediated teaching is situated in particular problems they encounter in everyday activities (Lave & Wenger, 1991; Lave, 1991; Rogoff & Lave, 1984) that raise new questions for them (Neumann, 2005, 2009a). Doing faculty work may cause them to question habits of mind or assumptions about effective teaching (Dewey, 1933; Schon, 1983, 1987). As a result, they may choose to engage in activities that test new solutions in efforts to develop new understanding (Rogoff, 1990; Schon, 1995). What is learned is not abstract; it

is embodied by individuals seeking to enact various ways of creating new understanding (Shulman & Hutchings, 2004; Shulman & Wilson, 2004).

Learning is shaped by engaging in academic work however, personal meanings also shape what activities professors choose to pursue (Bruner, 1990; Neumann, Schell, & Charron, 2005; Neumann, 2006, 2009b). The knower and the known are inextricably linked (Bransford et al., 2004; Krieger, 1985; Palmer, 1993, 1998). Although two professors might appear to share a similar goal-directed activity, their learning represents unique experiences of mind that are not easily transferrable to others (Neumann, 1998, 2009a). Consequently, any exploration of faculty learning involves an appreciation of the differences among learners, even if they work at the same institution, in the same field of study, with offices next to one another (Neumann, 2009a). A focus of what learning means to professors subjectively, within their professional lives, has the advantage of understanding professors' learning through meaningful tasks supported by several technologies, not just a single technology, e.g., a course management system, web 2.0 tool, etc. (Kaptelinin & Nardi, 2009). In addition, this places emphasis on technology-in-use through the long-term development of persons engaged the specific activities, social interactions, and intersecting contexts of academic work (Kaptelinin & Nardi, 2009).

In summary, faculty learn to teach digitally-mediated courses as they engage meaningful, goal-directed activities. Faculty learning about digitally-mediated teaching is situated in particular problems they encounter in everyday activities. Consequently, an exploration of faculty learning involves an appreciation of the differences among learners and how these activities support professors' learning.

Social interactions with colleagues. Faculty learn digitally-mediated teaching, both intentionally and incidentally, through social interactions with colleagues. Professors act “with,

or through, other people for instance, as members of groups, organizations, communities, or cultures” (Kaptelinin & Nardi, 2009, p. 37). A situated perspective on learning stresses that social interactions create contexts that support professors’ learning and that these “person-with-person relationships of scholars’ lives, as in all people’s lives, are central to development” (Neumann, 2009a, p. 405).

A professor’s disciplinary community is arguably the primary relation that shapes his or her teaching practices (Becher, 1987; Becher & Trowler, 2001; Clark, 1987, 1989). Teaching necessarily reflects the complex interplay between particular individuals and the disciplinary communities in which they participate (Schwab, 1978; Shulman, 2005b). Fields of study tend to share norms, values, and beliefs about what activities and achievements constitute professional advancement, including excellent teaching (Becher & Trowler, 2001). Beginning in graduate school, professors are socialized into the habits of mind, methods of inquiry, and professional norms of their discipline or field (Austin, 2002a, 2002b). They continue to learn beyond graduate school and throughout their academic careers (Lattuca, 2005; Neumann, 2005, 2009a). Over time professors learn the teaching practices of their community, but also develop their own ways of creatively embodying those practices (Gjerde, 2004; Senge, 1990). A professor is but one person participating within a larger community creating new understandings of effective teaching in their fields (Palmer, 1998; Wenger, 1999).

Throughout their careers, professors work with colleagues, students, and mentors, who act as co-learners who support their development (Mascolo, 2005; Mascolo & Bhatia, 2002; Rogoff, 1990). Their capacity to learn how to teach digitally-mediated courses may vary by the kinds and qualities of social support they receive from these colleagues (Fischer & Bidell, 2006; Fogel, 1993, 2006; Rogoff, 1990). Professors may learn through sharing emerging ideas in

dialogue with colleagues, or they may learn from reflecting on their own work with trusted friends. They may also learn through interactions in formal faculty development programs as well as informal networks of colleagues around the country (Marsick & Watkins, 2001). Co-learners may include colleagues at another university, doctoral students who co-teach their courses, departmental colleagues, and even students enrolled in their courses. They may intentionally seek out relationships to support their learning (Rogoff, 1990), as in creating an informal learning community, meeting with trusted colleagues, or seeking out a mentor. Other times, professors learn from relationships they do not intentionally seek out, such as by attending a departmental meeting discussing a new digitally-mediated academic program or participating in committee service hiring a new faculty member whose responsibilities include teaching digitally-mediated courses (Marsick & Watkins, 2001). Rapid advancements in technology may make expert faculty into novices resulting in a shift of power in the faculty-student relationship (Hartman et al., 2007). Thus, professors may also learn from students in their courses or doctoral student colleagues they advise.

In summary, professors learn digitally-mediated teaching through social interactions with colleagues, both intentionally and incidentally. Social interactions with others in their discipline or field create contexts that support their learning. Co-learners may include colleagues at another university, doctoral students who co-teach their courses, departmental colleagues, and even students enrolled in their courses. Professors learn through the combined sets of relationships whether they intentionally seek them out or not.

Intersecting, evolving contexts. Faculty learn digitally-mediated teaching as they hold the tensions and contradictions of living in intersecting, evolving contexts. How faculty perceive, understand, and interpret the meaning of what they are learning is interwoven in the contexts of

their work (Bronfenbrenner, 1979; Bruner, 1990; Austin, 1990) and efforts to interact intelligently with their environment (Rogoff, 1990; Wertsch, 1998). A situated perspective on learning stresses the inseparability of person-environment interactions and avoids treating these as separate elements of the learning process (Brown et al., 1989; J. Greeno, Collins, & Resnick, 1996; Greeno, 1998; Lave, 1991; Lave & Wenger, 1991; Rogoff, 2006; Vygotsky, 1978).

Professors' learning is neither determined wholly by context or fully by the self of the professor, but the interaction between the two (Baltes & Staudinger, 1996; Wertsch et al., 1995). Context is not merely an external force directing professors' actions; it is a generative force that becomes part of a professor's personal way of making meaning of their world (Bruner, 1990; Vygotsky, 1978). Professors are not replicas of their cultural contexts (Gjerde, 2004) rather, each professor's attunement to particular features of context shapes his or her learning. That is, professors' learning involves both the perception of new possibilities presented by a context as well as their own receptivity to exploring those possibilities (Barab & Roth, 2006; Neumann, 2009a).

Learning involves using sociocultural tools and engaging in social practices that support participation in particular communities (Gauvain, 2001; Rogoff, 2006; Wertsch, 1998). Changing sociocultural tools (e.g., emerging technologies) and social practices (e.g., shifting professional norms and new institutional initiatives) are particularly relevant to exploring professors' learning to teach digitally-mediated courses.

Emerging technologies. As new technologies like wikis, blogs, data visualization, and microblogging are woven into the cultural, economic and political fabric of students' lives, professors must consider whether such tools might align and strengthen the pedagogical goals of

their courses. Professors learn to use these tools for valued purposes in their communities through activities and social interactions (Gauvain, 2001).

The term “network society” attempts to describe the growth of networked, digital information and communications technologies as well as how key social structures and activities are becoming organized around electronically processed information networks (Castells, 2000). The shifting patterns of social relationships do not constitute a purely technological phenomenon, but ones that involve evolving cultural, economic, and political arrangements (Castells, 2000; Elliot & Urry, 2010; Warschauer, 2007). Such dramatic transformations in technology affect almost every aspect of higher education (EDUCAUSE, 2010; Gumport & Chun, 2006; Staley & Trinkle, 2011) and the daily work of professors.

The domains and social contexts in which we function are not static structures existing in a predefined reality. Instead, they reflect emergent systems of meaning and practice that arise within particular social and cultural contexts, motivated by social and economic need, and especially in current times – mediated by increasingly novel technologies. (Mascolo & Fischer, 2010, p. 32)

Shifting professional norms. Professional norms influence how faculty understand effective teaching. Digital technology increasingly mediates the social practices associated with academic work (Harley, Acord, & Novell-Earl, 2010). The nature of the academic work and the skills needed to perform it are changing (Austin, 2002a, 2002b; Plater, 2008; Hartman et al., 2007). New technologies are introducing alternative modes of instruction across the academic profession, challenging all types of professors to alter how they go about their work (Dede, 2008; Gumport & Chun, 2006; Hartman et al., 2007). Many faculty are unprepared for rapid changes in the academic profession, including increasing requirements to teach the burgeoning number of digitally-mediated courses (Okojie & Olinzock, 2006). Contrary to the notion that only part-time, non-tenure track faculty teach digitally-mediated courses, a national survey of faculty

participation in digitally-mediated instruction by the Association of Public Land-Grant Universities (APLU) found that faculty across all types of appointments – including part-time and full-time, tenure-track and non-tenure track, and all career stages – teach digitally-mediated courses (Wilson & Magid, 2009b).

New institutional initiatives. The growth of the Internet coupled with the demand for a highly educated workforce has led to pressures for research universities to adapt to changing national conditions. A major aspect of research universities' response to national economic and political pressures has involved the virtualization of their research, publication, and education functions (Pfeffer, 2003). Increasing numbers of higher education institutions are developing institutional strategies for blending online instruction with face-to-face instruction (Wilson & Magid, 2009a; Oh, 2007). Institutional leaders often view the increasing proportion of digitally-mediated courses as an opportunity to take advantage of the economies this form of instruction offers since digitally-mediated instruction does not involve the use of expensive brick-and-mortar classroom space (Finkelstein et al., 2000). While administrators champion digitally-mediated courses as a promising solution to control costs, provide greater access, and maintain quality by institutional leaders (Harley, 2001, 2002), some professors faculty have expressed concerns about inadequate institutional infrastructure to support digitally-mediated instruction (Ruth, Sammons, & Poulin, 2007; Wilson & Magid, 2009b).

In summary, professors learn teaching online as they hold the tensions and contradictions of living in intersecting, evolving contexts. Professors are not replicas of their cultural contexts; each professor's attunement to specific features of context shapes his or her learning. Learning involves using tools (e.g., emerging technologies) and engaging in social practices

(e.g., shifting professional norms and new institutional initiatives) that support participation in specific communities.

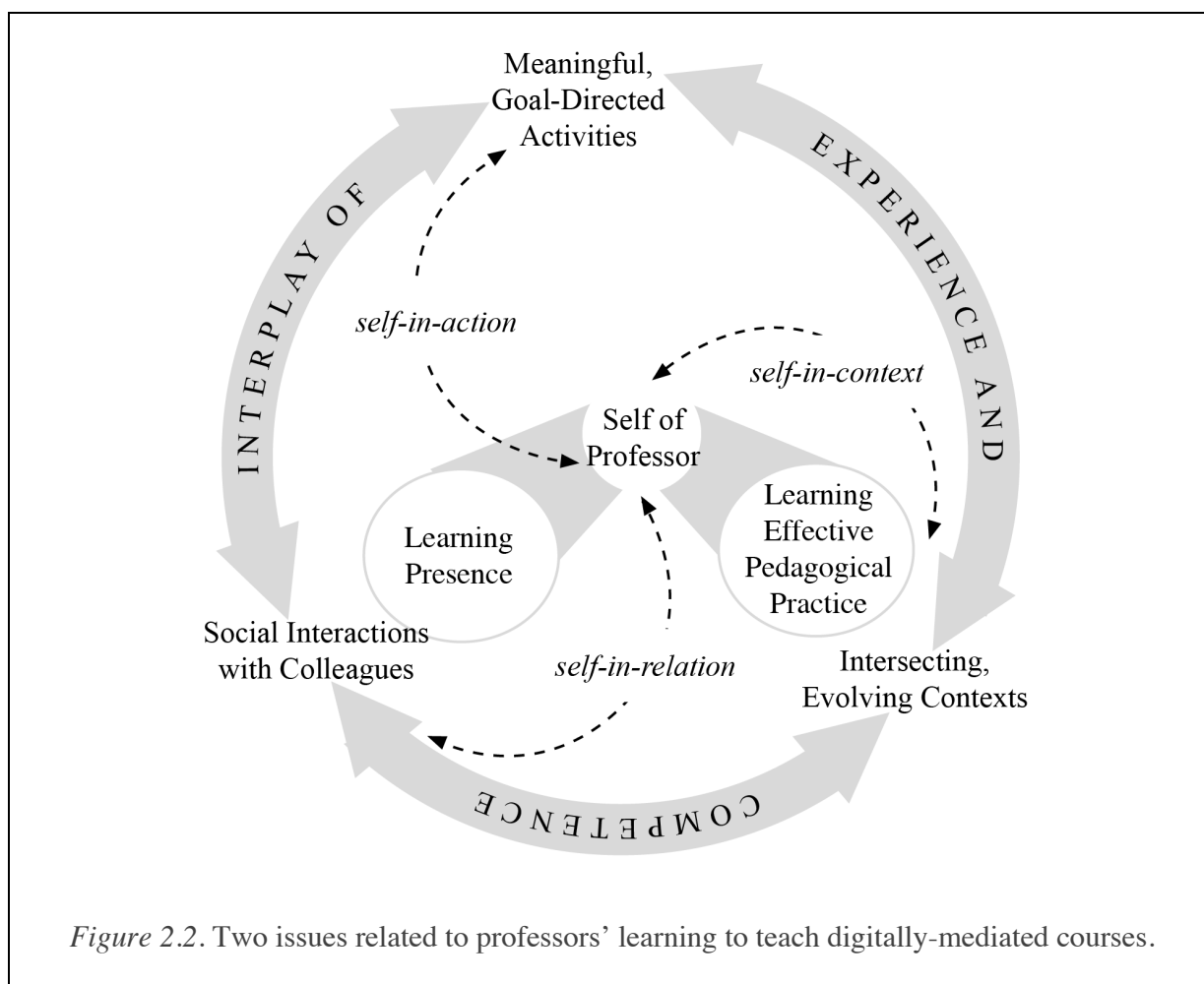
Learning Effective Pedagogical Practice

New technologies make digitally-mediated teaching challenging; they also affect how professors teacher and the human relationships vital to learning (Kaptelinin & Nardi, 2009). This section relates two issues academic researchers have identified as particularly relevant to learning effective digitally-mediated teaching: integrating technology and online presence. It relates these two issues to the conceptual framework outlined in the first section then expand on each of them. It argues that research suggests faculty learning to teach digitally-mediated courses may have experiences that differ from learning to teach more generally. It argues why exploring these experiences from the point-of-view of professors themselves provides perspectives that contribute to higher education research on faculty learning and professional growth.

Faculty learning takes place in different types of faculty work, including teaching, research, and service, as well as forms of work that involve combinations of these activities (Colbeck, 1998, 2002; Lattuca & Creamer, 2005; Lattuca, 2005). Faculty learning could be explored within each of these types of work, or work that involves combinations of these activities. This dissertation focuses on faculty learning related to teaching and specifically, faculty learning related to teaching digitally-mediated courses. It explores two specific issues from the research literature as particularly relevant to learning effective teaching digitally-mediated courses, yet under-explored from qualitative, first-person perspectives of faculty as learners: learning effective pedagogical practice and learning online presence. Although faculty may cite additional experiences in their efforts to learn to teach digitally-mediated courses,

I selected these issues due to the broad consensus around them as salient experiences related to effective teaching digitally-mediated courses.

Figure 2.2 illustrates how these two issues relate to the conceptual framework in Figure 1. Learning to teach digitally-mediated courses involves the interplay of a professor's experience of effective pedagogical practice and her understanding of this quality of effective teaching. Likewise, learning to teach digitally-mediated courses involves the interplay of a professor's experience of learning 'online presence' and her developing understanding of this quality of effective teaching online.



The capacities that undergird effective face-to-face teaching are dramatically different from the ones that undergird teaching digitally-mediated courses (Mishra & Koehler, 2006; Garrison et al., 2010). Master teachers in face-to-face contexts may not necessarily be perceived as master teachers in digitally-mediated contexts. “Technology makes teaching excellence a multifaceted construct. Technology makes determining quality teaching more complex and difficult” (Hartman et al., 2007, p. 68). Adapting to a new learning environment involves building and rebuilding professors' understanding of excellent teaching.

For example, an assistant professor might learn her approach to effective face-to-face teaching, including assessing students' level of engagement, facilitating class discussion, providing constructive feedback on course assignments, and adapting her teaching style to engage different types of learners. Over time, she may discover her own authentic way of teaching her field of study. However, if her department assigns her to teach one of their new fully online or hybrid courses, she may feel her understanding of effective teaching is challenged as she translates her experience teaching face-to-face to the new digitally-mediated environment. For a time, her sense of being an effective teacher may even collapse while she develops a way of teaching digitally-mediated courses that is once again reflective of her personal understanding of excellent teaching. This “interplay of experience and competence” (Wenger, 1999, p. 50) may raise questions that are specific to her as she learns what it means for her to teach with this new medium for human interaction.

Educational researchers have identified two specific issues as relevant to learning effective digitally-mediated teaching: integrating technology and online presence. The following two subsections examine both issues in more detail.

Integrating Technology In Teaching. Professors learning to teach digitally-mediated courses may experience dissonance between their experiences of effective pedagogical practice and their understanding of their ability related to this quality of effective teaching. Professors must develop pedagogical approaches they consider effective. Yet, effective pedagogies in face-to-face courses may not necessarily extend to digitally-mediated courses. Just as knowledge about effective teaching cannot be separated from disciplinary knowledge in a face-to-face course (Shulman, 1987), technological knowledge cannot be treated independent of its relationship to pedagogical and content knowledge in digitally-mediated environments (Mishra & Koehler, 2006). Teaching in digitally-mediated environments exists in a state of dynamic equilibrium (Koehler & Mishra, 2008), where a change in technology necessarily influences pedagogy and content. The move from a face-to-face course to a digitally-mediated course with the same content often involves professors rethinking their understanding of effective pedagogical practice (Peruski & Mishra, 2004).

Conceptualizations of how professors learn to teach digitally-mediated courses must consider how they understand and negotiate the complex relationships between the content of a course, pedagogical practices, and evolving technologies. However, there are two critical ways this dissertation contributes to exploring these complex relationships: understanding the subjective dimensions of adapting effective pedagogical practice and understanding digitally-mediated teaching in the context of professors' fields of study.

First, rethinking pedagogical practices in digitally-mediated environments certainly involves adapting pedagogical strategies to ensure similar student learning outcomes as measured in course papers or exams. At the same time, there are subjective dimensions of

effective pedagogical practice that may be overlooked without exploring its more personal dimensions (Stross, 2011). Professors strive for more than content mastery, but to stimulate critical reflection, cultivate curiosity, and fire students' imaginations (UC Berkeley Faculty Association, 2010; Rorty, 1999). These more intangible, affective qualities of effective teaching are not easily distillable to a list of teaching strategies.

Second, teaching a field of study involves developing the capacities of students to engage in “powerful but typically non-intuitive ways of thinking” (Gardner, 1999, 2007, p. 27). While an introductory course in statistics may be distillable to a series of exercises and exams with multiple-choice questions, a course designed to cultivate disciplinary habits of mind is far more complex: “Mastering a field of knowledge involves not only ‘learning about’ the subject matter but also ‘learning to be’ a full participant in the field. This involves acquiring the practices and the norms of established practitioners in that field or acculturating into a community of practice” (Brown & Adler, 2008, p. 19).

Professors in advanced-level courses, in particular, may experience unique challenges when adapting pedagogical strategies from face-to-face to digitally-mediated contexts. Disciplinary habits of mind are not easily captured as student learning outcomes. Disciplinary practices involve cultivating students' professional identity, membership in a disciplinary community, and understanding of that community's responsibility in society (Gardner, Csikszentmihalyi, & Damon, 2002; Palmer, 2007; Sullivan & Rosin, 2008). Professors support students as they wrestle with the types of ambiguous, complex problems they may face in practice (Shulman, 2005a). A professor who models disciplinary habits of mind in face-to-face courses (Collins, 2006) might grapple with difficult questions about how to model those practices in a digitally-mediated environment.

Online presence. Faculty learning to teach digitally-mediated courses may experience dissonance between their experiences of being present and their understanding related to this quality of effective teaching digitally-mediated courses. Educational researchers have conceptualized qualities of digitally-mediated environments that support knowledge construction by creating various forms of online presence, measures of social, cognitive, and teaching presence (Garrison & Arbaugh, 2007). Faculty who teach digitally-mediated courses often must learn forms of interaction where students perceive them as being active participants in the course, i.e., teacher presence, (Anderson, Rourke, & Garrison, 2001), sustain reflection and conversation, i.e., cognitive presence, (Garrison, Anderson, & Archer, 2001), and allow students to develop relationships in a trusting environment, i.e., social presence, (Garrison et al., 2010). For more than ten years, researchers have examined the various ways faculty utilize teaching, social, and cognitive presence to engage learners in collaborative knowledge construction (Garrison et al., 2010).

Conceptualizations of how professors learn to teach digitally-mediated courses must consider how they support deep and meaningful learning through developing social, cognitive, and teaching presence. However, there are two key ways this dissertation contributes to exploring cultivating presence in digitally-mediated environments: understanding the subjective dimensions of “being there” and the practical strategies of negotiating “not being there” given the 24/7 nature of teaching digitally-mediated courses.

First, the notion of presence defies precise definition. It does not describe a specific teaching strategy; rather, it seeks to capture a critical and elusive quality of a professor and learning environment. Good teachers are “really there when they teach” (Palmer, 1998, p. 10). Professors support students as they struggle to understand complex ideas. Professors may

learn ways to foster this elusive quality in face-to-face classes. Research highlights how digitally-mediated courses may be isolating for students (Tyler-Smith, 2006), the sense of meaningful presence is also an essential dimension of academic teaching. Exploring the subjective dimensions of how professors learn to teach digitally-mediated courses facilitates a deepening understanding of what it means for professors to “really be there when they teach” (Palmer, 1998, p. 10). Wendy Brown’s criticism of digitally-mediated education is illustrative of some professors’ concern for the lack of presence in digitally-mediated courses:

What is sacrificed when classrooms disappear, the place where good teachers do not merely ‘deliver content’ to students but wake them up, throw them on their feet and pull the chair away? Where ideas can become intoxicating, where an instructor’s ardor for a subject or a dimension of the world can be contagious? (UC Berkeley Faculty Association, 2010, p. 1)

Second, given the 24/7 aspect of teaching a digitally-mediated course, presence may equally be understood as “not being there.” Faculty may feel that students expect they are always present (Amiel & Orey, 2006; Young, 2002). A majority of professors perceive teaching digitally-mediated courses as taking significantly more time and effort than face-to-face teaching (Wilson & Magid, 2009b), and may also identify the need to develop skills related to workload management that support effective teaching (Amiel & Orey, 2006; Crews et al., 2008; Young, 2002). Digitally-mediated courses are not bound by a specific time or physical classroom space, faculty must be not present in order to create balance within their work and life (Heijstra, 2010). The prolonging of the workday and demand for extensive availability is a significant challenge faced by faculty who teach digitally-mediated courses (Heijstra, 2010; Ward & Wolf-Wendel, 2005). Exploring the subjective dimensions of professors learning to teach digitally-mediated courses allows understanding teaching presence in the context of the professor’s own life and work.

In summary, educational researchers have identified two issues as particularly relevant to effective digitally-mediated teaching: learning effective pedagogical practice and learning online presence. Faculty learning to teach digitally-mediated courses involves the interplay of a professor's experience of effective pedagogical practice and her understanding of this quality of effective teaching. Likewise, faculty learning to teach digitally-mediated courses involves the interplay of a professor's experience of learning online presence and her developing understanding of this quality of effective teaching. Exploring these experiences from the point-of-view of professors themselves contributes perspectives that inform higher education research on faculty learning and professional growth.

Existing Research on Professors Learning to Teach Digitally-Mediated Courses

Tallent-Runnels' (2006) review of research on digitally-mediated teaching and learning identified four main themes related to digitally-mediated education: course environment, learners' outcomes, learners' characteristics, and institutional and administrative support. Yet, a small but growing body of research specifically examines professors' experiences with digitally-mediated teaching. Over the past decade, research on faculty experiences with digitally-mediated teaching has evolved with digitally-mediated teaching itself. The implications of digitally-mediated teaching for academic work have been investigated from multiple perspectives, including different strategies for faculty development, the experiences of faculty who teach digitally-mediated courses, and best practices of digitally-mediated teaching. This section reviews existing literature related to the experiences and learning processes of professors who teach digitally-mediated courses in higher education institutions.

Higher education institutions have responded to the growth of digitally-mediated education by creating faculty development programs that support professors who teach digitally-

mediated courses. Research on faculty development is predominately descriptive in nature, focusing on single campuses or single academic programs, recommending strategies based on personal experience (Barczyk, Buckenmeyer, Feldman, & Hixon, 2011; Hannon, 2008; Jamieson, 2004; Kearsley, 2008; Slaouti, 2007; Villar & Alegre, 2007). Studies with analytical frameworks have been limited, relying on relatively small sample sizes (Barczyk, et al., 2011) or focused mainly on educational developers' perspectives, not faculty perspectives (Hannon, 2008). An exception to this is Koehler, Mishra, & Yahya (2007) who used quantitative content analysis to examine the progression of two faculty teams in a course design seminar. Their study offered compelling evidence that faculty sensitivity to the relationship of teaching and technology increases when given opportunities to reflect on their digitally-mediated courses. While research on faculty development examines faculty learning in formal contexts, there is a gap in knowledge about faculty learning in informal contexts. In addition, such studies miss faculty who do not participate in the faculty development programs being examined. This is a particularly salient problem because many faculty members do not participate in such programs.

A metaethnographic analysis of nine different research studies of faculty who teach digitally-mediated courses concluded that faculty members believe digitally-mediated teaching changes the way they design courses, organize their time, interact with students, and approach teaching (Major, 2010). Phenomenological studies confirm these findings noting faculty ambivalence towards digitally-mediated teaching, with experiences of both satisfaction and difficulty designing and facilitating them (Conceicao, 2006). Interview investigations of work-life balance identified the prolonging of the workday and demand for extensive availability as significant challenges faculty experience as they teach digitally-mediated courses (Heijstra, 2010; Ward & Wolf-Wendel, 2005). Wasilik and Bolliger (2009) used quantitative analysis to

examine the faculty satisfaction with digitally-mediated teaching at a small research university. Results were mixed. On the one hand, faculty indicated frustration concerning technological difficulties, lack of face-to-face contact, and uneven student engagement. On the other hand, faculty with higher degrees of student-to-instructor interaction had significantly more positive experiences with digitally-mediated teaching. While studies of faculty experiences provide relatively consistent information regarding the impact of digitally-mediated teaching on academic work, they do not provide insight into the learning processes of faculty who teach digitally-mediated courses. Specifically, they do not help us understand what professors do as a result of such experiences or how they view such experiences within the contexts of their life and work.

Finally, over the last decade, practitioners and scholars alike have collectively developed best practices related to digitally-mediated teaching (Boettcher & Conrad, 2010; Fish & Wickersham, 2009; Ko & Rossen, 2010; Palloff & Pratt, 2011). While best practice literature addresses practices that may be useful for professors who teach digitally-mediated courses, it places undue emphasis on the practices of exemplary faculty. This focus may ignore possible variations in ways different faculty approach learning about digitally-mediated teaching within the context of their overall work as well as their desire to implement such best practices.

This section reviewed existing literature related to the learning processes of professors who teach digitally-mediated courses in higher education institutions, including faculty development, faculty experiences with digitally-mediated teaching, and best practices literature. Overall, research on faculty development is primarily descriptive with few studies using empirical data or analytic frameworks. Research on experiences with digitally-mediated teaching is consistent, yet would be enhanced with deeper exploration of faculty learning from such

experiences. Research on best practices mainly focuses on exemplar faculty while ignoring variations in ways faculty may approach digitally-mediated teaching within the context of their overall work.

Conclusion

This dissertation advances research on how university professors who teach digitally-mediated courses learn about this form of academic work within the context and goals of teaching in their disciplines or fields. The current study utilizes a definition of learning informed by sociocultural theory and advanced within the communities of practice literature, defining it as “the interplay of experience and competence” (Wenger, 1999, p. 50). Learning from this perspective is not just acquiring knowledge, mastering teaching techniques, or developing technical skills. It involves all aspects of human experience, where a person develops an identity and seeks meaning through active social participation in a community (Bruner, 1990; Lave, 1991; Vygotsky, 1978).

In this study, the focus on the subjective dimensions of professors’ learning allows academic administrators and educational researchers to understand learning to teach digitally-mediated courses from the point-of-view of professors themselves. It explores the interrelationship of three dimensions of learning in relation to the self of the professor. Three dimensions of the “interplay of experience and competence” (Wenger, 1999, p. 50) related to professors’ learning include: engaging in meaningful, goal-oriented activities (self-in-action); social interactions with colleagues (self-in-relation); and adapting to intersecting, evolving contexts (self-in-context). Professors learn to teach digitally-mediated courses by engaging in meaningful, goal-directed activities; through social interactions with colleagues, both

intentionally and incidentally; and as they hold the tensions and contradictions of living in intersecting, evolving contexts.

New technologies make digitally-mediated teaching challenging; they also affect how professors teach and the human relationships vital to learning (Kaptelinin & Nardi, 2009). Thus, the final section related two issues researchers have identified as particularly relevant to learning effective teaching: integrating technology and online presence. This section argues why exploring these experiences from the point-of-view of professors themselves contributes perspectives that inform higher education research on faculty learning and professional growth. Research on faculty development is primarily descriptive with few studies using empirical data or analytic frameworks. Research on experiences with online teaching is consistent, yet would be enhanced with deeper exploration of faculty learning from such experiences. Research on best practices generally focuses on exemplar faculty while ignoring variations in ways faculty may approach online teaching within the context of their overall work.

CHAPTER 3: METHODOLOGY

The purpose of this study is to explore professors' points-of-view of what it means to learn about digitally-mediated teaching within the context and goals of teaching in their discipline or field. The organization of this chapter is as follows: (a) I provide an overview of the research design; (b) I present details of the site and participant selection; (c) I describe the data collection and data analysis procedures; and (d) I review efforts to protect the privacy and confidentiality of the study's participants.

Overview of Methodology

I recruited 16 participants to engage in an interview-based study of university professors' points-of-view of what it means to learn about teaching digitally-mediated courses in their disciplines and fields. All participants teach digitally-mediated courses at a single major public research university, yet represent diverse fields and a range of appointment types (i.e., assistant, associate and full professors).

The study occurred in two phases. In Phase I, I interviewed 16 professors for 90 to 120 minutes. I collected supplemental documents, such as curriculum vitae, tenure narratives, teaching statements, course feedback from students (if available), course materials, and course syllabi. I used these materials to clarify and amplify interview data as well as provide topics and questions for Phase II interviews. In Phase II, I conducted 60-minute follow-up interviews with fifteen of the 16 original participants. One participant did not agree in a follow-up interview due to a medical leave of absence. Phase II interviews served to clarify the original interview data, ask additional questions about other issues that had not been probed during the initial interview, and pose further questions that emerged from initial analysis of the interview data. I collected other documents from the participants, if necessary. Table 3.1 summarizes the study design.

Table 3.1

Description of Phase I and Phase II

Phase I	Phase II
16 participants	15 participants
Interview (90-120 minutes)	Follow-up interview (60 minutes)
Supplementary document collection	Additional document collection, if necessary

Research Paradigm

This dissertation is a naturalistic, interpretivist study in that it aims to gather an in-depth, understanding of the meanings and experiences of humans and their social worlds (Lincoln & Guba, 1985; Denzin & Lincoln, 2005, 2008; Leedy & Ormrod, 2010; Patton, 2002). Naturalistic, interpretivist studies attempt to “understand the meaning people have constructed about their world and experiences” (Merriam, 2009, p. 4). Denzin and Lincoln (2005) wrote, “Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry” (p. 10). Within this paradigm, researchers see themselves as active participants in the research process who seek to illuminate others’ subjective meanings and experiences (Denzin & Lincoln, 2005). Qualitative researchers seek to capture participants’ perspectives with depth and complexity (Geertz, 1973). High-quality qualitative research illuminates the participants’ subjective meanings, actions, and social contexts “to understand the world from the subjects’ point-of-view” (Kvale, 1996, p. 1). Therefore, this study places emphasis on understanding professors’ own interpretations of the meaning of their experiences learning to teach digitally-mediated courses.

A qualitative, interpretivist approach allowed me to develop new concepts and theoretical perspectives as I explored the situated dimensions of what it means for professors to pursue their learning in relation to their understanding of effective teaching in their discipline or field. This

approach is appropriate given the definition of learning used in this dissertation as the “interplay of experience and competence” (Wenger, 1999, p. 50) in that it seeks to understand the specific activities, social interactions, and contexts that support learning from the point-of-view of the professors themselves (Barab & Duffy, 2000; Barab & Roth, 2006; Greeno, 1998; Brown et al., 1989; Lave, 1991; Lave & Wenger, 1991; Rogoff, 1990; Rogoff & Lave, 1984; Wenger, 1999). Fogel (2006) explicitly cited the need for qualitative research in situated studies of human development in order to understand the meaning-mediated interactions that support learning.

Grounded Theory

Since the aim of this study is to clarify what it means for professors to learn about digitally-mediated teaching within the context and goals of teaching in their disciplines or fields, it is necessary to engage in theory-building. I explored the situated dimensions of professors’ learning—and the human activities, social interactions, and cultural contexts that support it—from the point-of-view of the professors themselves. My understanding emerged from the data, rather than an a priori theory about how faculty learn this particular aspect of academic work.

Grounded theory is suited to this type of approach (Creswell, 2006; Charmaz, 2006; Glaser & Strauss, 1967; Leedy & Ormrod, 2010; Strauss & Corbin, 2005).

Grounded theory is a type of qualitative research “aimed at deriving theory through the use of multiple stages of data collection and interpretation” (Leedy & Ormrod, 2010, p. 108). A grounded theory approach is especially useful when existing theories are inadequate or nonexistent (Creswell, 2006). The design is appropriate for this dissertation because grounded theory studies give “priority to the studied phenomenon or process—rather than to a description of a setting” (Charmaz, 2006, p. 22). The use of in-depth interviews and document analysis are common in grounded theory research designs given that the data collected focus on the

perspectives and interpretations of the participants (Creswell, 2006; Charmaz, 2006; Glaser & Strauss, 1967; Leedy & Ormrod, 2010; Strauss & Corbin, 2005).

Site Selection

This study occurred at a single major Carnegie Research University (Very High Research Activity) in the Midwestern part of the United States. I chose this institution for four reasons: First, the public research university in this study, like other major public research universities, is expanding the number of digitally-mediated courses (Wilson & Magid, 2009a, 2009b; Allen & Seaman, 2010a, 2010b). Second, public universities make up 73% of total enrollments in higher education and 46% of online-only enrollments (Allen & Seaman, 2010b). Third, 79% of public doctoral institutions report increased demand for digitally-mediated courses (Allen & Seaman, 2010b) and more than one-third of public university professors have taught a digitally-mediated course (Wilson & Magid, 2009b). Finally, large public institutions teach considerably more students enrolled in digitally-mediated courses than institutions of any other size (Allen & Seaman, 2010b).

Participant Selection

This study employed a purposeful sampling strategy where individuals with characteristics specific to the study's research questions are identified and included in the study (Lincoln & Guba, 1985; Leedy & Ormrod, 2010; Patton, 1999, 2002). Purposeful sampling involves "studying information-rich cases in depth and detail. The focus is on understanding and illuminating important cases rather than on generalizing from a sample to a population" (Patton, 1999, p. 1197). In accordance with standards of rigor in purposeful sampling, the sampling strategy for this dissertation involved specific criteria for the selection of participants who would yield data related to the study's purpose and major questions (Patton, 1999, 2002). Sampling was

conducted in a two-stage process involving a nomination process followed by the selection of the final participant list.

The nomination process was central in the construction of this study. All participants in this study were professors who teach at least one digitally-mediated course. Three equal-sized groups of participants (about five to seven professors for each group) were selected for the study. Groups were identified by qualities that reflect a range of forms of participation in learning about digitally-mediated teaching. I used the following three criteria for nomination for each of the three faculty groups respectively. Participants selected for the first group had received formal recognition for outstanding digitally-mediated teaching. Formal recognition included such things as receiving an award for outstanding digitally-mediated teaching from the institution or their facilitation of a faculty learning community related to digitally-mediated teaching. Participants selected for the second group were actively pursuing learning related to their digital-mediated teaching with colleagues. Actively pursuing learning related to digitally-mediated teaching was evidenced by such things as their participation in a faculty learning community, their attendance at workshops sponsored by the university related to digitally-mediated teaching, or their participation in informal communities that actively reflect on digitally-mediated teaching. Participants selected for the third group were faculty members who teach a digitally-mediated courses yet evidence of their participation in activities related to learning about digitally-mediated teaching is minimal.

Because this dissertation draws on a definition of learning informed by sociocultural theory, the diversity in forms of participation listed above correspond to a variety of forms of participation in the communities of practice literature (Wenger, 1998). In particular, professors in the first group, whose digitally-mediated courses have been formally recognized by the

institution or faculty colleagues, reflect the qualities of active participants or insiders. Professors in the second group, who are actively pursuing learning related to their digitally-mediated teaching, reflect the qualities of peripheral participants who may be moving towards full participation or remain on a peripheral trajectory. Faculty in the third group, where the evidence of their participation in formal activities related to learning about digitally-mediated teaching is minimal, reflect the qualities of full non-participants or outsiders.

This study focused on how faculty learn to teach digitally-mediated courses; it was not on the quality of digitally-mediated teaching itself. Thus, the three groups were intended to identify a range of forms of participation in faculty learning communities at the institution. The three groups were not intended to represent any form of participation as “better” or “worse” or make assumptions about the nature or quality of digitally-mediated teaching within the various groups. Rather, the purpose of the three groups was to approximate a range of forms of participation in learning about digitally-mediated teaching and, thus, possible variations in how different types of faculty may learn about teaching digitally-mediated courses. By purposefully selecting a variety of forms of participation, the study aimed to capture the on-the-ground experiences that authentically reflect various kinds of faculty members, not just those experiences of any specific group.

I anchored my selection of participants from the perspectives of those in the institution who were positioned to make judgments about professors who embodied the descriptions of the three different groups. I began the nomination process by emailing each nominator an explanation of the study’s purpose and criteria for nomination along with an invitation to schedule a face-to-face meeting (see Appendix C). Nominators included the Director of Faculty and Instructional Development Programs, the Coordinator of Instructional Technology, and the

Director of Virtual University Design and Technology. These individuals were well-positioned to make nominations of professors for this study. The Director of Faculty and Organizational Development was familiar with professors and thus in a position to recommend professors. The Coordinator of Instructional Technology Support sponsors a bi-annual faculty seminar on instructional technology and he was aware of professors' use of technology at the university. The Director of Virtual University coordinates university-wide initiatives to support professors developing digitally-mediated courses.

The Director of Faculty and Instructional Development Programs, the Coordinator of Instructional Technology, and the Director of Virtual University Design and Technology were well-positioned to identify professors that have participated in a university-sponsored Faculty Learning Community on digitally-mediated teaching, professors that have participated in formal programs or workshops, as well as professors who teach digitally-mediated courses but do so independently. I consulted with these individuals both to nominate professors as well as identify individuals within colleges and departments (e.g. deans and department chairs) with whom I could also meet with to identify professors for this study. I placed priority on selecting participants who were nominated by several individuals.

This initial fieldwork identified qualified participants prior to commitment to an in-depth study of the final group of participants selected for this study (Patton, 1999, 2002). Based on these nominations, I compiled a list of potential participants. Within this list, I identified proportionate numbers of professors with assistant, association, and full professor appointments in a diversity of disciplines and fields. I also made efforts to ensure representativeness of gender, age, ethnicity and race. I selected a final list of 16 professors for this study (five to seven participants for each of the three groups).

Data Collection

The following section describes the data collection procedures for this study. Table 3.2 links the major research questions of this study with the data to be collected (Anfara, Brown, & Mangione, 2002).

Interviews. This study primarily drew on interview data to answer the research questions. “Both grounded theory methods and intensive interviewing are open-ended yet directed, shaped yet emergent, and paced yet unrestricted” (Charmaz, 2006, p. 28). I have constructed a semi-structured interview protocol (see Appendix B). I used feedback from a pilot interview with a colleague in the College of Education adjust the Phase I Interview Protocol. This feedback ensured that the interviews would be an appropriate length and that they could elicit meaningful information related to the research questions.

Once the Phase I interview protocol was finalized, I emailed the potential participants to invite them to participate in the study. This initial contact included a general description of the study, its purpose, and the length of the interview (see Appendix D). If a professor indicated a willingness to participate in this study, I scheduled an interview at his or her convenience and sent the consent form in advance. I conducted interviews with all study participants in their offices or a location of their choice.

Qualitative interviews provide “an open-ended, in-depth exploration of an aspect of life about which the interviewee has substantial experience, often combined with considerable insight” (Charmaz, 2006, p. 29). The interviews used open-ended questions to elicit detailed responses from participants (Beech, 2009; Diccico-Bloom & Crabtree, 2006). I structured the interview using three types of questions: main questions, follow-up questions, and probes (Rubin & Rubin, 2005). Grounded theory interviewers must fully engage the participant throughout the

Table 3.2

Research Questions In Relation To Data Collected

Research Question	Data Collected
What do professors experience as they transition from teaching face-to-face courses to teaching digitally-mediated courses?	Interview: Q1, Q2, Q3, Q10, Q11 Documents: Teaching Statement, Tenure Narratives, Student Feedback, Course Materials
From these professors' points-of-view, how did they learn personally meaningful digitally-mediated teaching practices?	Interview: Q3, Q4, Q5, Q6, Q7, Q8 Documents: Tenure Narratives, Other Materials
How do professors describe learning to teach digitally-mediated courses within particular departments and colleges within the university?	Interview: Q1, Q6, Q8, Q9, Q10, Q11, Q12 Documents: Course Syllabi, Course Materials, Teaching Statement
How do professors describe effective pedagogical practice in teaching digitally-mediated courses?	Interview: Q12, Q13, Q14, Q15, Q16 Documents: Course Materials, Student Feedback, Teaching Statement

interview and remain “alert to interesting leads” (Charmaz, 2006, p. 32). While I followed the same semi-structured protocol for each interview, I remained open “to changes of the sequence and form of the questions in order to follow up the answers given and the stories told” by the participants (Kvale, 1996, p. 124). This flexible format allowed a natural dialogue to emerge between myself and the participant. At the same time, the interview guide provided sufficient structure to make sure the interview stayed on track. It allowed me to elicit “nuanced descriptions that are precise and stringent in meaning and interpretation” (Polkinghorne, 1989, p. 49).

Phase I and II interviews took place over a five-month period through the summer and fall of 2011 (see Appendix A). Phase I interviews lasted approximately 90 to 120 minutes. Phase II interviews lasted approximately 60 minutes. All interviews were digitally recorded and fully transcribed using a transcription service. After receiving the transcribed text, I listened to each interview again to check for accuracy. I also added to my descriptive and reflective notes for each interview.

In grounded theory, data are collected until a saturation point is reached (Glaser, 2001). However, grounded theorists debate the meaning of saturation (Dey, 1999; Glaser, 2001). Therefore, researchers must provide a rationale of what constitutes saturation as well as evidence that they have achieved it (Morse, 1995). This dissertation utilizes the meaning of saturation advanced by Charmaz (2006), defining it as the point when “gathering fresh data no longer sparks new theoretical insights, nor reveals new properties of these core theoretical categories” (p. 113).

Documents. I collected supplemental documents from each participant, such as curriculum vitae, tenure narratives, teaching statements, course feedback from students (if available), course materials, and course syllabi (see Table 3.2). These documents provided additional context to the interviews, as they offered perspectives on how the professor represented his or her work to students and colleagues. Documents were used primarily to supplement interview data as well as to provide topics and questions for the Phase II follow-up interviews.

Data Analysis

Data analysis was built upon the naturalistic, interpretivist foundations described earlier. My goal was to understand what it meant for professors to learn to teach digitally-mediated

courses within the context and goals of teaching in their discipline or field. I used an inductive, iterative process throughout the data analysis. Charmaz (2006) describes this as “a method of analysis that generates successively more abstract concepts and theories through inductive processes of comparing data with data, data with category, category with category, and category with concept. Comparisons then constitute each state of analytical development” (p. 187). My approach to data analysis was to: (a) write a summary review memo within 48 hours of the interview and transcribe the interview within one week of the interview; (b) code each transcript line-by-line (i.e., initial coding), and map the patterns and relationships among initial codes for each transcript (i.e., focused coding); (c) write reflective memos on relationships across participants; and (d) develop a list of emergent themes across participants. Emergent themes from Phase I were used to construct the Phase II interview protocol. Phase II followed a similar process to Phase I, followed by the drafting of initial findings report. I describe each part of data analysis in more detail below; however, Figure 3 illustrates an overview of how the data analysis proceeded.

Empirical research has established the effect of disciplinary culture on all types of faculty work (Austin, 1990; Becher, 1987; Biglan, 1973; Clark, 1987, 1989; Kuh & Whitt, 1988). Thus, any research on academic teaching must necessarily take into account disciplinary culture in its analysis. Disciplinary cultures are rooted in different knowledge traditions (Clark, 1983; Biglan, 1973; Becher, 1987) and are one of the most influential forces in faculty work (Austin, 1990; Becher & Trowler, 2001). While disciplines may exhibit broad patterns of norms, values, and beliefs, the degree to which any particular individual faculty member’s participation in these practices is likely to vary (Becher, 1987). Disciplinary patterns necessarily reflect a complex interplay between particular individuals and the disciplinary cultures in which they participate

(Neumann, Parry, & Becher, 2002). The participants in this present study are members of a range of disciplines; therefore, I paid careful attention to the role of discipline in teaching practices throughout data analysis.

Additionally, sociologists have distinguished education *for the professions* from education *in the disciplines* (Lattuca & Stark, 2009). While some disciplinary typologies include professions alongside disciplines (Biglan, 1973; Becher, 1987), I remained attentive to the distinctives between traditional academic disciplines and more applied professional fields. Specifically, the community of scholars in professional fields extends beyond academic contexts to practitioners who are generating knowledge to solve problems in other contexts. While professional fields share intellectual roots with certain disciplinary traditions (e.g., electrical engineering applies physics and mathematics), members of academic disciplines value advancing knowledge in their field regardless of any immediate practical application. Consequently, in data analysis I remained mindful of the similarities (e.g., shared intellectual roots) and distinctives (e.g., contexts of knowledge generation, type of knowledge valued, etc.) among faculty who teach in traditional academic disciplines from those who teach in professional fields.

Summary Review and Transcription. I made both descriptive and reflective notes immediately after each interview to make certain to record the details of what happened in the interview and capture my subjective perceptions and analysis of the conversation (Rubin & Rubin, 2005; Kvale, 1996). I digitally recorded my reflections responding to the post-interview interviewer commentary questions (see Appendix B). Furthermore, I reviewed the digital recording of the interview within 48 hours and wrote a summary review memo drawing on my notes. The summary review memo included my descriptions and reflections related to the four

research questions (see Appendix G). I transcribed the interview within one week, noting any additional reflections to add to the summary review memo.

Initial and Focused Coding. Charmaz's (2006) coding process for grounded theory was utilized for coding interview transcripts and documents. I used Microsoft Excel throughout data analysis for initial coding and focused coding of transcripts.

Initial coding. I imported transcripts into Microsoft Excel for initial coding. "Initial codes are provisional, comparative, and grounded in the data. They are provisional because they are open to other analytic possibilities and create codes that best fit the data you have" (Charmaz, 2006, p. 48). Initial coding involved a "detailed line-by-line analysis to generate initial categories (with their properties and dimensions) and to suggest relationships among categories" (Strauss & Corbin, 2005, p. 57). I reviewed each transcript and document line-by-line and assigned codes whenever I found a meaningful segment of text, including keywords, phrases, and issues (Miles & Huberman, 1994). Remaining true to grounded theory, I was careful not to allow existing concepts and categories limit the initial coding process. Thus, I used "in vivo" codes (Creswell, 2006, p. 238), i.e., codes that reflected the participants' language as closely as possible, whenever I found a meaningful segment of text. I continued this process until I had segmented all of the data and completed the initial coding process.

Focused coding. After initial coding had established "some strong analytic directions" (Charmaz, 2006, p. 57), I began focused coding for larger segments of the data. In focused coding, I refined the codes that emerged from initial coding. I classified and compared groups, and I refined groups of codes through the use of concept maps and diagrams to uncover emerging relationships or themes. As I developed focused codes, I included notes about their meaning, qualities, and circumstances in which I applied them. Grounded theory coding "begins

to unify ideas analytically because you kept in mind what the possible theoretical meanings of your data or codes might be” (Charmaz, 2006, p. 71). As keywords, themes, or patterns began to appear in the text of one interview or document, I reread the other interviews and documents for related keywords, themes, and patterns. Given that data collection and interpretation are “guided by successively evolving interpretations made during the course of the study” (Strauss, 1987, p. 10), possibilities continued to emerge as I examined interrelationships and identified the core aspects of participants’ perspectives. At this point in data analysis, I wrote an individualized one-page memo to each participant, offering my own reflections on our conversation, inviting their comment and feedback.

Reflective Memos. In grounded theory, memos serve as a “running record of insights, hunches, hypotheses, discussions about the implications of codes, additional thoughts, and whatnot” (Glaser & Strauss, 1967, p. 110). In contrast to the summary review memos that offered descriptive and reflective analysis on each interview separately, reflective memos allowed me to “think on paper” about cross-cutting ideas, concepts, and themes. Memos allowed me to capture thoughts and construct meaning from the data (Emerson, Fretz, & Shaw, 1995) as well as create and refine the coding structure. In writing the memos, I carefully moved back and forth between the transcripts, documents, codes, categories, and concept maps. “Memo-writing is the pivotal intermediate step between data collection and writing drafts of papers. When you write memos, you stop and analyze your ideas about the codes in any and every way that occurs to you during the moment (see also Glaser, 1998). Memo-writing constitutes a crucial method in grounded theory because it prompts you to analyze your data and codes early in the research process” (Charmaz, 2006, p. 72).

Emergent Themes. The purpose of grounded theory is to “demonstrate relations between conceptual categories and specify the conditions under which theoretical relationships emerge, change, or are maintained” (Charmaz, 2002, p. 675). Thus, I reviewed summary review memos, coding lists, and reflective memos to examine the networks of relationships that had emerged from my data analysis. I paid particular attention to generative themes, i.e., topics identified by participants themselves as central to their work that entail contradictions or dilemmas (Freire, 1970). I searched for negative cases to provide alternative explanations or new concepts related to my emerging theory (Strauss & Corbin, 2005). Only negative cases that emerged from the studied empirical data informed my analysis (Charmaz, 2006). The process of identifying emergent themes included the development of a clustered concept map showing how initial codes and focused codes related to the emergent themes being advanced (Anfara et al., 2002; Sturges & Klingner, 2005). I paid particular attention to ensure that emergent themes recognized the value of the diversity among people. Themes developed in Phase I are not represented as the shared meanings of all participants (Gjerde, 2004; Wainryb, 2004) rather, themes developed in Phase I are viewed as starting places for further investigation during Phase II of this study. I placed particular emphasis on understanding the variety of ways participants understood each theme (Gjerde, 2004; Wainryb, 2004). True to grounded theory, I used the themes based on the data collected in Phase I and Phase II interviews to outline a theory that described the phenomenon under investigation (Charmaz, 2006).

Credibility

Qualitative methods too “often remain private and unavailable for public inspection” (Constas, 1992, p. 254). In this study, I verified the credibility of my findings from three perspectives: (a) maintaining a reflexive journal to monitor my own subjectivities and biases; (b) carefully documenting the emergence of the final coding scheme; and (c) member checks with participants.

First, I kept a reflexive journal to monitor my own subjectivities and biases. Qualitative research is a “demanding exercise in not knowing, a deliberate attempt to hold back from premature interpretation and to capture the process of emergence” (Fogel, 2006, p. 21). In the tradition of grounded theory, my process was to be inductive, allowing themes to emerge from the data. I fully recognize that the concepts in my mind are difficult, if not impossible, to escape. It is difficult for any person to step outside her or his own lived experience, sociocultural location, and disciplinary point-of-view. Thus, I took detailed notes of my personal reflections in a reflexive journal and allow emergent themes to further inform and revise my understanding of what it means for professors to learn to teach digitally-mediated courses within the context and goals of teaching in their fields of study. Deliberately engaging and monitoring my subjectivities, i.e. “engaged subjectivity” (Schram, 2006, p. 135), is critical to enhance the credibility of my research. I carefully attended to discrepant data and looked for rival or competing themes and explanations that supported alternative explanations (Patton, 1999, 2002). I paid particular attention to identifying differences and similarities between each professor’s approach to his or her own learning. I paid close attention when particular cases did not “fit” within the patterns identified (Patton, 1999, 2002; Sturges & Klingner, 2005).

Second, I carefully documented the emergence of the final coding scheme so others may ensure that I followed appropriate and thorough research procedures. Much of the criticism directed toward qualitative findings emerges from doubts about the nature of the analysis (Patton, 1999). Therefore, as recommended by Anfara et al. (2002), I carefully documented the emergence of the final coding scheme (see Appendix H). This process involved detailed notes on how data were collected, how thematic categories were developed in data analysis, and how decisions were made throughout the study (Sturges & Klingner, 2005). This detailed account of my reflections and decisions let readers determine whether the themes I have constructed are credibly grounded in the data, and whether my inferences in the analysis are trustworthy and defensible (Sturges & Klingner, 2005).

Third, member checks supported my analysis and ensured that an emic perspective emerges from the findings. I conducted member checks early in the development of the coding scheme to ensure the quality of the data. I used member checks in two ways to reduce the possibility of misunderstanding participants' meanings. I sent transcripts to the professors for verification to ensure that their thinking was recorded accurately. In addition, I wrote a short, one-page memo that summarized the main themes of our interview. I sent both the transcript and the one-page memo to each participant for their feedback. This process allowed all participants to evaluate the findings and provide their perspectives on my analysis. I used their questions, comments, or suggested changes to rethink my codes and data analysis. The summaries elicited further responses from participants that amplified and expanded on our initial conversation. Furthermore, at the conclusion of Phase II of the study, I sent a two-page draft of significant findings from the study to each participant for review. This process allowed all participants to

offer their perspectives on my analysis, including, sharing questions, comments, or divergent perspectives.

Consideration of Human Subjects

I treated the privacy and confidentiality of the study's participants with the utmost concern. During the consent process and during the interview, I ensured the participants' privacy was protected. I ensured our interactions took place in private offices where others could not overhear the interview. Prior to data collection, I informed each participant of the potential risks, and attempted to limit risk by assuring voluntary participation and confidentiality. I was sensitive to the participant's level of comfort throughout the interview and redirected the interview conversation if the participant showed discomfort or anxiety.

Participant data files containing interviews, documents, summary review memos, reflective memos, and related materials were secured in locked file cabinets and password protected server space at Michigan State University. The data were accessible only to the researchers associated with this study and the Institutional Review Board. During analysis, numeric codes were assigned to the information so participants' names were not associated with the data files. Data will be stored for at least 3 years after the project closes. Three years after the conclusion of the study, the data (digital audio files, transcripts, my notes, documents related to digitally-mediated courses) will be destroyed.

In writing about the participants, I protect their privacy and confidentiality by masking identifying data and reporting findings as themes. When necessary, I report individual responses generically using pseudonyms and masking other markers of identity (e.g. discipline, subject of teaching, and biographical data). In addition, I pay careful attention to ensure contextual details do not reveal the identities of the professors.

CHAPTER 4: FINDINGS

This study explored the experiences of 16 professors learning to teach digitally-mediated courses. I met with each professor for a 90-minute interview, followed-by a 60-minute interview three-months later. Although all participants teach advanced-level, asynchronous online courses at the same university, they represent diverse fields and a variety of academic ranks, i.e., assistant, associate and full professors (see Appendix H).

In this chapter, I argue that new technologies not only change the practices of academic teaching; the changing practices affect a professor's experience of teaching itself. A deepened understanding of how digitally-mediated teaching affects a professor's experience of teaching is the main contribution of this study. The proposed framework outlines three dimensions of experience the professors in my interviews inevitably confronted when teaching digitally-mediated courses. This chapter uses examples from the professors in this study to illustrate each of the three following dimensions:

Engagement in work explores the physical interactions of digitally-mediated teaching. Professors engage physical objects and settings in crafting a teaching experience; this dimension provides insight into how the aesthetic qualities of the immediate environment affect professors' digitally-mediated teaching experiences.

Engagement of one's self explores the personal meanings of digitally-mediated teaching. Professors express distinct personalities, teaching perspectives, and professional histories in crafting a teaching experience; this dimension provides insight into how individual differences of style affect professors' digitally-mediated teaching experiences.

Engagement with others explores the social bonds of digitally-mediated teaching. Professors encounter active, creative, biographical human beings in creating a teaching

experience; this dimension provides insight into how a sense of relatedness to others affects professors' digitally-mediated teaching experiences.

The purpose of a grounded theory study is to generate a theory, one that is inductively derived from the study of phenomena. This study proposes one way for higher education scholars to understand professors' experiences teaching digitally-mediated courses. The researcher developed the framework with several purposes in mind:

First, the proposed framework attempts to accentuate facets of experience which distinguish learning personally meaningful approaches to digitally-mediated teaching from learning to teach more generally. The framework captures the aspects of the experience most frequently described by professors yet also reflects variation in the qualities of those experiences.

Second, the proposed framework takes an eudaimonic approach to human development, emphasizing the development of functional relationships, not the integration of different types of knowledge, as a central feature of professors' learning and professional growth.

Third, the proposed framework views engaging the tensions digitally-mediated teaching evokes as the primary means of supporting professors' professional growth. The framework is designed to help professors make sense of their experiences with one another, not fully resolve the tensions of digitally-mediated teaching.

Finally, the proposed framework emphasizes how personally meaningful approaches to digitally-mediated teaching evolve from a history of interactions along three dimensions of experience. Professors' repeated interactions on the screen, over time, affect how they engage in this form of academic work. The emphasis on a history of interactions allows an exploration of how digitally-mediated teaching affects professors' academic identities as constructed through evolving life stories.

Table 4.1 summarizes the three dimensions of experience outlined in this chapter. It illustrates the varying complexity of engagement professors experience in efforts to develop personally meaningful approaches to digitally-mediated teaching. Although the experiences on the continuum are ordered from less complex to more complex, any variation is not indicative of the value of the experience. The continuum seeks to highlight, instead, that faculty members have constellations of experiences which vary in their richness and complexity.

Table 4.1

Three Dimensions Of Engagement in Professors' Efforts To Develop Personally Meaningful Approaches To Digitally Mediated Teaching

Engagement	Disengaged ---	Non-Engaged -----	Engaged -----	Immersed--->	
<i>in work</i>	Averse Episodes	Scattered Efforts	Mundane Routines	Normal Rhythms	Rewarding Challenge
<i>of self</i>	Futile Resistance	Dutiful Obligation	Personal Commitment	Professional Alignment	Innovative Endeavor
<i>with others</i>	Isolated Estrangement	Reduced Image	Sporadic Glimpse	Ordinary Encounter	Enriched Understanding

I conclude each dimension subsection with an analysis organized by the amount of time professors have taught digitally-mediated courses. The analysis identifies the various kinds of experiences each of the sixteen professors described within that particular dimension. I organize the sixteen professors into three groups: professors who have taught digitally-mediated courses for three years or less (Group 1), four to seven years (Group 2), and seven or more years (Group 3) respectively.

Dimension 1: Engagement in Work

The engagement in work dimension explores the physical interactions of digitally-mediated teaching. Professors engage physical objects and settings in crafting a teaching

experience; this dimension provides insight into how the aesthetic qualities of the immediate environment affect professors' digitally-mediated teaching experiences.

Professing is a full sensory experience. The everyday objects of teaching affect a professor's unfolding experience and the visceral, immediate, felt qualities their experience evokes. Engagement in work develops through an evolving relationship between a professor and her physical surroundings. The felt qualities of the physical surroundings to which a professor must continually adapt is much different on a screen than in a classroom. The sensory experience of typing on to a two-dimensional screen in one's office feels qualitatively different than walking into a lecture hall filled with students. The physical objects and surroundings shape the meaning of the professor's experience. Table 4.2 outlines the varying kinds of experiences professors described concerning the engagement in work dimension.

Averse Episodes. Averse episodes involve experiences of work tainted by abhorrent episodes or a series of progressively negative events. When Katheryn Roth began teaching a section of her face-to-face course online, her typical work routine unraveled. Her online course intruded on her ability to get other work done; she felt exasperated teaching a course that she had taught for over a decade:

What I could explain to a student in five minutes, it was taking me lots and lots of time to explain. That was very bothersome to me. Very bothersome. So I didn't like that. You know how you have a bad attitude. I had a bad attitude because I thought, "Why are we doing this? This is way too much work. We're having to explain everything. I don't know who these people are." It was a lot of work. A lot, a lot of work. I thought, "I never want to do this again!"

Katheryn's declaration, "I'll never do this again!" distinguishes an averse episode; such experiences create a strong aversion to similar experiences in the future. She felt constricted by a technological straight jacket; teaching felt impersonal, mechanical, and maddening. Her

Table 4.2

Varying Kinds Of Experiences Professors Described Concerning Engagement In Work

Engagement in Work	Description	Example Words and Phrases From Interviews
Averse Episodes	tainted by abhorrent episodes or a series of progressively negative events; creates an aversion to similar experiences in the future	onerous, never again, bothersome, horrible, insane, dumb, irritated, annoying, pain in the rear end
Distracted Efforts	marked by recurring distractions, interruptions, or impediments; creates ambivalence toward similar experiences in the future	wasted, try, tried, distracting, crashing, falling apart, crazy, poor use of my time, harder to maintain
Mundane Routines	dull, insipid, or tedious activity; creates an indifference towards similar experiences in the future	in the can, lull, lose something, unfun, eh
Normal Rhythms	sustained engagement in everyday activities of academic work, contributing to slow, incremental growth; creates an openness to similar experiences in the future	just another responsibility, incremental, evolve, play
Rewarding Challenges	substantial engagement in optimally challenging activities, provoking new ideas and possibilities; creates an anticipation of similar experiences in the future	enjoyed, resonated, satisfying, stretch, cool, super interesting, challenge, fun, exciting, flourish

aggravation built over the semester, continually intruding on her ability to form relationships with students and engage in meaningful work.

Nita Venturini described the thoughtful attention she devoted to designing her first digitally-mediated course. Yet, she felt irritated by a series of unfortunate catastrophes. Her experience involved more than momentary feelings of confusion; it raised deeper concerns about how teaching digitally-mediated courses would distract from the substantive focus of her academic work:

This is a horrible example in terms, not that you want to admit saying you spent so much time on this. I literally spent 15 hours trying to figure out why I had a buzz in my recording. And I can't just call someone up. They'll have suggestions. It turns out it's the power brick of my computer. And what's the solution to that? And 15 hours not spent writing a research article – it's horrifying! It's not just trying to find out the problem – but the solution – because there were different solutions offered. It was insane. It's dumb!

For Nita, the consequences of these unpredictable calamities felt palpable. Her initial experience intensified concerns about the aversive effects digitally-mediated teaching could have on her academic career. She feared the inordinate amount of time her digitally-mediated course required jeopardized her chances of being awarded tenure, if her efforts were not valued in the promotion and tenure process:

It's like, "Is this how I'm supposed to be using my time? I have no choice. I have to do this." Then there's concerns about research productivity, for sure, and I've had this discussion. It's like, well, if this isn't valued, then I'm in a bad way.

Onerous experiences, like the ones described by Kathryn and Nita, are distinguished by their visceral intensity. The meaning of an aversive experience comes both from the immediate sensations it evokes and the possible consequences it portends. Their accounts demonstrate how even a few particularly negative experiences shape the memory and meaning of digitally-mediated teaching in a professor's life and career.

Scattered Efforts. Scattered efforts are marked by recurring distractions, interruptions, or impediments. Professors engage in a flurry of activity, however, the experience never acquires momentum despite their dedicated efforts. A professor may immerse himself in the activities of teaching a digitally-mediated course; yet, at the end of the day, he is uncertain whether his effort genuinely contributed towards creating something of value. The experience, while not particularly aversive, feels disjointed and remains unfulfilling. It creates ambivalence toward similar experiences in the future.

Julianne Inniss, a young assistant professor, described her first digitally-mediated course as a “nightmare for students.” A steady stream of minor issues distracted her from teaching; addressing students’ technical concerns became the primary focus of her attention:

I didn’t think I should be spending 90% of my time interacting with students around the technology we were using to manage the course. I thought that was a really poor use of my resources. I had a lot more to offer than just how to use [the course management system] or who do I go see if I’m having a problem with [the course management system]. All of that kind of stuff. I feel like a lot of time was being wasted trying to figure out how to get the technology to do what we wanted it to do. It was distracting from the real point of the course.

Julianne’s sense of wasting time on incidental issues is a distinguishing feature of scattered efforts. Distraction not only affects students’ learning, it pulls professors’ attention away from engaging in meaningful work. Meaningful experiences may occur, but they are discrete and unpredictably interrupted. The experience, as a whole, never gains any momentum of its own; it is characterized by fits and starts of activity that do not flow in any particular direction. Rather than experiencing the rewards of a culminating experience, professors breathe a sigh of relief when a course ends.

Linda Scaff used various mobile and social networking technologies in her professional work and incorporated assignments with social media in her face-to-face courses. She had a sophisticated understanding of the scholarly literature on teaching; and she sought out opportunities to learn about effective teaching, such as attending a National Science Foundation workshop on designing creative projects in the classroom. When I asked Linda Scaff about her strengths as a teacher, she replied:

I try really hard. I really, really want to be an effective instructor. I definitely try hard. I’ve definitely been in classes where instructors are not trying hard. I think I’m really passionate about the subject matter that I teach.

Despite dedicated efforts to design a high-quality course, unpredictable technical issues distracted her from creating a meaningful learning experience. The course management system “was always falling apart” and required her full attention. The technical issues students encountered in her course prevented them from seeing her dedication to teaching and passion for her subject-matter. The final course evaluations confirmed her students’ disappointment:

I'm really passionate about my subject and I was really excited about it, but I think some of the students said that they wouldn't take another class related to [my area of focus] because of [the technical issues in] this class, of my class the first semester, they were disappointed in it.

Several professors, like Linda, used phrases like “harder to maintain” to describe their digitally-mediated courses. Such phrases suggest energy and effort being devoted towards preserving the status quo, like maintaining a used car. It is unclear whether the flurry of efforts contributed towards creating something of enduring value.

Mundane Routines. Mundane routines involve dull, insipid, or tedious activities. They are, by definition, uneventful and unmemorable. One professor, for example, described a hallway conversation where a colleague asked her, “Are you teaching this semester?” She answered, “I’m teaching online.” “How do you like it?” She replied, “Eh.” Mundane routines feel like mindless rituals. Professors who described these activities expressed a lack of enthusiasm towards digitally-mediated teaching. Mundane routines create an indifference towards similar experiences in the future.

Mundane routines felt more bland, less energizing than the normal routines of teaching. Although professors did not experience particularly aversive events, the experience itself lacked the lulls and climaxes that infuse teaching with its dramatic qualities. Professors felt like they repeatedly followed a mechanical routine, step-by-step. Gerald McQuade described the dramatic qualities of responding to situations that arose in his face-to-face lectures:

I'm good – I believe – at recognizing in the classroom when students understand something and when they don't just from their faces, when they're bored, and I need to stop and pull them back to me.

Recording lectures, by comparison, felt dull and bland for him, like giving a lecture to an lecture hall full of empty chairs:

If you think about a live lecture, there's the challenge of how am I going to do it and then there's the challenge of doing it. And that part isn't there in the sense of the interaction phase, it's not there.

When I asked Gerald McQuade how that had affected his experience of teaching, he responded, “It makes it *unfun*. I'm good online, but it's really, the fact that you have no audience, there's not fun, to be honest, there's no fun.” Gerald's lack of enjoyment is a distinguishing feature of mundane activities. The experience lacked the open-endedness, the unpredictability, and the challenge that made teaching an enjoyable enterprise.

Patrick Plunkett taught three different sections of the same economics course, including one online section. Like many professors in this study, his goals for teaching extended well-beyond helping students comprehend the subject-matter; he also hoped to impart ways of relating to the subject-matter and meaningful ways of relating to life itself as a member of his field.

When I asked him to describe his approach to teaching, he responded:

[Long pause.] I'm thinking. [Pause.] How do economists think the world works. Let me rephrase it that way. How do we *think* the world works. And here is the framework that we use. And these are the models that we use. And this is how we put them together. And this is how you get from Point A to Point B.

He derived great satisfaction from sensing that students had begun to question their own assumptions and use evidence to form well-reasoned judgments about complex economic and social issues. In his courses, he raised questions and modeled habits of minds in relating to the subject-matter at hand. He wanted students to ask questions and discover their own ways of relating to it. In describing what he valued most about teaching, he went on to say:

I want people who come out of a university to be able to question things, and to be able to think clearly about them. They don't have to agree. People disagree on stuff, but you need to be able to form an argument, understand other people's arguments, look at evidence, evaluate evidence and not just accept a bumper sticker as being truth.

Patrick skillfully presented complicated arguments: “If a student's willing to bear with me, they will get it.” He inevitably made errors in his in-class lectures, requiring him to go back and correct mistakes. His experience teaching digitally-mediated courses, in contrast, felt “in the can.” He had recently created several highly-produced video presentations; yet, the student exam scores unexpectedly dropped from years past. He wondered whether his polished presentations had influenced students approach to problem solving in his course:

I'm wondering if the more smooth the presentation, the worse they do. They see this stuff, "I don't have to think hard about that" because he's spoon-feeding to me. Where, if you're in there and you're making mistakes in the lecture, and kind of scribbling. They have to work to think about that. And I think they do better. They don't like it as much, but I think they actually learn it better if it's not polished. So the studio gives polished stuff, but it may not be educationally appropriate. So much is talked about producing something that's perfect. I think if it's perfect it lulls them into a false sense of thinking they know what's going on. I may be totally wrong. It's been my observation, that the more you give the less they have to work at it and maybe the less they... if you don't give a lot, if you're sloppy and mistake prone, they don't like that, but they learn it.

The unexpected drop in exam scores led Patrick to reflect on his view of effective teaching. He himself enjoyed “playing around with technology.” Yet, he wondered about the extent to which his well-produced presentations belied something critically important about the nature of problem-solving in his field. The polished presentation felt more mundane than scribbling and making mistakes. Patrick communicated something important about himself and his subject in his rough-hewn presentations of complex problem solving strategies.

Normal Rhythms. Normal rhythms involve the everyday activities of academic work, contributing to slow, incremental growth. The digitally-mediated teaching experience naturally

flowed as part of the professor's regular pattern of activity at the university. The normal rhythms of academic work gain value in the long-term, although their impact may not be immediately evident. The challenges of everyday experience sustain a professor's interest over time. Such experiences create an openness to similar experiences in the future.

Drew Cleveland described digitally-mediated teaching as "just another responsibility" in his academic life. He had developed sustainable routines so he felt the flexibility to tinker with his course to explore new ideas and approaches for digitally-mediated teaching. Tinkering with his courses not only improved the student experience, it was how he slowly evolved as a professor:

Those are the kind of things we play and do. Some of it's play. But it is how you evolve. It can be fun. You like to try things. You like to see, "Does this work the way that I think it would work?" It's no different than bench research. It's the same kind of thing. It's a different realm. It's like, "So if we do this, is that going to deliver what we hope it's going to deliver?" That is teaching! You get bored. Seriously. You teach it for the same 20 years – you get bored – it's time to try it a little bit different.

Michael Duvall, too, did not view digitally-mediated teaching as distinct from his other faculty responsibilities. Over the years, he had created a wide-ranging repertoire of materials that he could draw on in teaching digitally-mediated courses. His reuse of these trusted materials allowed him to easily adapt to the ebb and flow of academic work demands:

Everything is always a constant negotiation with all the other responsibilities in your life. So I don't think that it's any different other than the challenge is, "How do I find time to do this?" That includes writing an article or teaching a course online or anything else that we do. It's always a matter of what's most important at the time... All learning is incremental. I'm not sure [digitally-mediated teaching] is really different.

Michael viewed digitally-mediated teaching, like any other form of teaching, as "an opportunity for professional growth." He tinkered with new possibilities in his digitally-mediated

course as part of his normal academic routine. These small, incremental changes mirrored his unfolding curiosities with the internet-based technologies he encountered outside his course:

I'm constantly struggling with the idea of how to have students interact with the material, so now I'm also working on commenting... so I'm trying to pick up different styles of how to do that, like the [website] has one way of doing it, [website] has another way of doing it. Constantly trying to figure out what's the right way to do that.

The normal rhythms of digitally-mediated teaching did not feel mind-numbing or repetitive. Instead, repeated experience afforded the opportunity to carefully study professors' own ingrained practice, refining skills of digitally-mediated teaching. This capacity to slowly rework the physical materials of teaching afforded new possibilities for enhancing their own experience.

Rewarding Challenges. Rewarding challenges involve substantial engagement in optimally challenging activities, provoking new ideas and possibilities. They exist at the growing edge of a professor's capabilities. Such endeavors are "out of the norm" of everyday experiences but in a challenging, productive way that supports a professor's own professional development. Professors feel fully alive and engaged; full immersion in the challenge evokes excitement, enjoyment, and interest. Such experiences create an anticipation of similar experiences in the future.

The two professors who predominately described rewarding challenges compared the work of digitally-mediated teaching to the work of art. The work allowed these professors to express important facets of themselves while creating meaningful learning experiences for students. Derek Mederos' work reflected both his dedication to designing a meaningful learning experiences for students and his deep enjoyment of art and design. Designing digitally-mediated courses resonated with him:

Mostly what I found out is that - I have an art background - and to me online development is actually very similar in that you're developing a product, so you can shape and craft it. So the actual production part I found I resonated with because I really enjoyed that whole, "How do I make an experience?" Early on I was really excited about it.

He found the experience of teaching digitally-mediated courses "super interesting" and it opened up new ideas and possibilities for teaching. He believed "you can do anything online."

The challenge of designing digitally-mediated courses stretched his development in delightfully unanticipated ways. He felt his endeavors contributed to creating something of enduring quality:

So to me the art and design aspect is because it plugs into production for me and crafting a product and that I think is the satisfying part and also the part that makes me want to put more time and effort into it. I view everything that I put out there as... and it might be the fact that I view digital products as product, whereas for some people it's kind of ephemeral, it's out there, it's temporary, it may be that they don't view it as the firm entity that I do. It also allows me to stretch this part of me that I thought would actually not be incorporated in my job.

Stuart Widrick also viewed digitally-mediated teaching as the work of art. Stuart "always had a teacher's mentality" from medical residency to ultimately joining the faculty at the university. The emergence of new digital technologies opened up new possibilities for teaching, reshaping his scholarly trajectory more directly around digitally-mediated medical education. He described the anticipation that arose as he considered "what could be" and "what might happen" from his work:

As I started to evolve in my own skill and competency, you start to see the potential. Then, if your mind is churning a little bit, you say, "Maybe this could be used for yada yada, I wonder if that's possible?" And then, it becomes your own.

He responded to moments of struggle, resistance, and uncertainty with the anticipation that something new would emerge from his endeavor. Even when students told him that his first course was "awful," he found the challenge exhilarating. He anticipated that his efforts could

advance medical education in meaningful new directions; successes and setbacks were saturated with significance. He viewed his work, not simply as a course being designed, but as a work of art being created:

It's like my Mona Lisa. I look at it that way. It's my way to be creative. It's my way to develop something. This is my Mona Lisa. This is my project. This is what I enjoy working on. It gives me a creative outlet; it gives me a scholarship outlet. And it may die with me, who knows, but who cares! From my standpoint, if it lives beyond me or not, I don't really care. I just like working on it and I like the validation that comes with some of the occasional successes with scholarship.

Stuart invested his course with animate qualities, viewing his digital project as something enduring and alive. He, too, felt alive in the making of it. Not surprisingly, professors who described rewarding challenges used words like interesting, challenging, and exciting to describe their experience. Such language highlights the felt connection professors develop with the experience with the physical materials of digitally-mediated design. Ellen Lloyd used the word “fun” nine times to describe creating her first digitally-mediated course:

I think part of it was, at the time when we first created the course, it was all kind of exciting because nobody had done it quite like that before. It was all hit or miss. You know that's fun. It's a little bit of discovery. Then it's finding out that students actually a) learn and b) enjoy it. When you get their evaluations you're always hesitant to read them. And I would share the evaluations with the [instructional design unit] people and they'd get excited too, "Oh yeah!" So, yeah, it's fun. It's making something and seeing it flourish. Always a good thing.

Ellen also imbued her experience with animate qualities, using the metaphor of birth to describe it: “You birth something together, so you're the birth parents of this entity that kept growing and moving and turning out to be okay.” Professors described slowly refining, personalizing, and identifying with the created materials of their work. The act of creation aroused new possibilities for their work and new meanings for themselves.

Shirley Even, an older full professor, viewed the opportunity to teach a digitally-mediated course as a way to revitalize her teaching in the latter part of her faculty career. She welcomed

the challenge of creating a digitally-mediated course; she believed the experience could broaden her understanding of teaching, allowing her to continue to learn and grow:

I was asked to consider [teaching an online course] and we did not have that many faculty members who were teaching online courses. So I looked at it as a challenge and something that I was really interested in doing.

In contrast to the other kinds of experiences, rewarding endeavors evoked the anticipation of similar experiences in the future, and the motivation to persist despite uncertainty and short-term setbacks from engaging in work. The experience, as a whole, gained a momentum of its own; it developed a coherent direction as it unfolded over time; professors enjoyed the rewards of a culminating experience.

Summary. This section outlined the varying qualities of the experience professors described concerning engagement in work. Professors experiences ranged from adverse episodes, to scattered efforts, to mundane routines, to normal rhythms, to rewarding challenges. Table 4.3 identifies the kinds of experiences each professor mentioned in the interviews related to the engagement in work dimension. The first group primarily mentioned adverse episodes, scattered efforts, and mundane routines; only one professor mentioned normal rhythms and no professors mentioned rewarding challenges. The second group varied widely in their descriptions; no professors mentioned adverse episodes. The third group primarily mentioned normal rhythms; and one professor mentioned rewarding challenges.

Dimension 2: Engagement of One's Self

The engagement of one's self dimension explores the personal meanings of digitally-mediated teaching. Professors express distinct personalities, perspectives on teaching, and professional histories in crafting a teaching experience; this dimension provides insight into how individual differences of style affect professors' digitally-mediated teaching experiences.

Table 4.3

The Kinds Of Experiences Each Professor Mentioned In The Interviews Related To The Engagement In Work Dimension

	Averse Episodes	Scattered Efforts	Mundane Routines	Normal Rhythms	Rewarding Challenges
<i>Group 1 (≤3 Years Experience Teaching Digitally-Mediated Courses)</i>					
Julianne Inness	•	•	•	•	
Katheryn Roth	•				
Linda Scaff	•	•	•		
Nita Venturini	•	•	•		
<i>Group 2 (4-7 Years Experience Teaching Digitally-Mediated Courses)</i>					
Drew Cleveland			•	•	
Shirley Even		•		•	•
Ellen Lloyd		•		•	•
Gerald McQuade		•	•		
Derek Mederos				•	•
Patrick Plunkett		•	•	•	
Jason Reynolds			•	•	
<i>Group 3 (7+ Years Experience Teaching Digitally-Mediated Courses)</i>					
Michael Duvall				•	
Terry Eaton				•	
Jeremy Hamilton				•	
William Meredith				•	
Stuart Widrick				•	•

Professors distinguish themselves from their colleagues in their personal approaches to teaching; they turn a course into something they want to know and express. Even professors who teach the exact same subject-matter exhibit significant variations in their personalities,

cognitive styles, and approaches to teaching. In assigning two professors the same course, a student discovers as much about differences among professors as they do commonalities. The act of professing reminds professors how they are like all other professors and like no other professor. What makes a professor a professor is, in part, what makes that professor different from all other professors.

Learning to teach digitally-mediated courses involved more than acquiring requisite skills and competences; it also involved whether valued aspects of a professor's self found realization in the experience. The emphasis of this dimension, then, is the extent to which professors' experience of digitally-mediated teaching expresses a professor's own personal initiative and direction for her academic career. A professor's motivation depends on the degree to which her preferred activities align with the social norms and practices of her department. Table 4.4 outlines the varying kinds of experiences professors described concerning the engagement of one's self dimension.

Futile Resistance. Some professors felt compelled to teach digitally-mediated courses. They reluctantly followed the social norms of their department and engaged in the activity only after considerable resistance. Katheryn Roth used vivid language to describe her distaste for digitally-mediated teaching. Her department chair had assigned her an online section of one of her favorite face-to-face courses; she characterized the move as “forced entry.” The department chair ignored her protests:

It's like after-the-fact. It's like a glass of water on the floor. We already made the decision to go online. “Get with the program... get with the program!” It's like, “Okay, well, you don't like it, so what are you going to teach?”

She eventually acquiesced to the norms of her department, but only to avoid the consequences of not going along with the department's new initiative. Her efforts felt futile; she

Table 4.4

Varying Kinds Of Experiences Professors Described Concerning Engagement Of One's Self

Engagement of One's Self	Description	Example Words and Phrases From Interviews
Futile Resistance	activity done with resistance and reluctance, to satisfy social norms and expectations; person resists the social norms of group; person would definitely cease the activity in the absence of social expectations	forced, get with the program, useless
Dutiful Obligation	activity done out of duty, responsibility, or sense of obligation to social norms of the group without alignment with personal goals; person conforms to the social norms of group; person would likely cease activity in the absence of social expectations	not by choice, push, pressure, part of the job, not the winner, homogenized, try not to get sucked in
Personal Commitment	activity reflects a personal commitment or value a person strongly identifies with, even if it is not the person's preferred activity; person identifies with the personally important aspects of social norms of the group; person may, or may not, continue activity without social expectations	there's a role, greater access, allows growth for the program
Professional Alignment	activity is broadly congruent with the one's personally endorsed goals, done within bounds of normal activities; person aligns with social norms of the group; person may, or may not, continue activity in the absence of social expectations	fortuitous, fits my style, best for me, what I like, part of my job that I love, my strengths, frees me
Innovative Endeavor	activity embodies an intrinsic and evolving interest; person creates novel and imaginative ways of stretching social norms; person will likely continue activity or find alternate expressions of the activity in the absence of social expectations	bottom-up, innovative, expansive, synergistic, integrates, flows, it's me, perfect alignment

felt disempowered: “Some complaining is just useless. You can complain. It’s like ‘I heard you, now shut up.’” A professor, like Katheryn, would definitely not teach digitally-mediated courses if the opportunity presented itself.

Dutiful Obligation. Other professors engaged in digitally-mediated teaching out of obligation to the social norms and expectations of their department. They taught online courses out of duty, responsibility, and a sense of commitment to colleagues in their department. Like professors who felt compelled to teach online, professors motivated by dutiful obligation felt they had no choice; they simply chose to go along with the social norms of the department as opposed to actively resisting them. Their decisions, however, left them wondering whether going along with social expectations would adversely affect other aspects of their academic work. Nita Venturini said, for example:

There's a huge conflict between the need and want for high-quality teaching and what all our other... what else we should be doing. And it's unclear about how that's going to be resolved, if ever. It's unclear. So this course was highly valued from the chair just because of its place in the Ph.D. program, which that's the only reason and so... for the most part... so there's that conflict. At the university, I feel like the faculty member is not the winner in this situation at the university.

In the case of dutiful obligation, a professor’s activity is primarily motivated by the need to satisfy socially constructed contingencies. The metaphor Nita used to describe her experience highlights the lack of personal initiative she felt directing this aspect of her academic work: “So it’s almost like, you feel like the train is moving, I need to be on the train, the train is not going to stop, but I’m not going to stop being able to do online teaching.” While professors, like Nita Venturini, complied with the requirements of her department, her efforts were strongly motivated by external demands and pressures:

This course was a big deal. It was communicated to me that it had to be high quality. It was communicated to me that the Dean of the Graduate School knew about this course and the Dean here knew about it. It was not under the radar at

all... I was going to say reasonableness, but that's not right, because this was insane. It was really, really a lot of work. There wasn't any balance. There were things that I absolutely had to do that were late. There were paper reviews, paper submissions that didn't happen, at least one. Yeah, and it's not good. It was hard.

Gerald McQuade felt the continual addition of responsibilities for faculty at the university distracted professors from devoting time towards personally meaningful aspects of their work: “I don't think faculty right now are being asked, over the last five years, are asked to balance things. They're just being asked to add things.” Nonetheless, digitally-mediated teaching was “part of the job” of a faculty member in his department. When I asked Gerald about the kind of advice he would offer departmental colleagues teaching their first digitally-mediated course, he responded jokingly, then shared a more serious analysis:

Apart from “Don’t!” [Laughs.] [Long pause.] Try not to get sucked in too much time-wise. That’s going to be an impossible piece of advice. [Long pause.] Maybe, since we’ve got a couple of programs now – but one thing we have interestingly resisted is having the courses look the same. Every time that idea comes up, it gets pushed down. I’m perhaps the firmest in pushing it down because, well, “I do it the best way, so why should I do it your way?” and “They don’t want to do it my way.” So what I’m saying is, “Do it your way.” My advice would be, “Do it your way.”

Gerald McQuade’s advice to “do it your way” highlights the central importance of personal initiative and direction in developing personally meaningful approaches to digitally-mediated teaching. Technology is not simply a tool; it is a medium for each professor to express differences of personality, cognitive styles, and approaches to teaching.

Dutiful obligation, for Michael Duvall, meant temporarily acquiescing to a course management system where the act of teaching felt homogenized. Although his departmental colleagues had diverse personalities and teaching styles, the template and organization of the course management system erased these important variations among his colleagues. Teaching

felt insipid. He contrasted his personality and teaching style with that of a close colleague who taught many of the same courses:

We were always teaching in [the course management system] and all those courses look alike. That's something that [my departmental colleague] and I were very much against. If we had two different face-to-face classrooms, they wouldn't look anything alike. And [my departmental colleague] and I share a lot of things in common. We teach differently. If you walked into [my departmental colleague's] class you'd know it. If you walked into my class you'd know it. But if you walked into two [online] courses, you couldn't tell the difference from them other than reading the section headers and the reading selections would be different. It's very homogenized.

Professors, like Michael and Gerald, searched for ways to leave a personal mark on their work; this mark expressed important individual differences. They resisted a felt sense of teaching as a prefabricated experience stamped out by the course management system. Instead, like artisans, they distinguished their work with fine details that expressed personally important aspects of themselves, including distinctive personalities, cognitive styles, and approaches to teaching the subject matter of the course.

Personal Commitment. Although some professors did not prefer to teach digitally-mediated courses, they found meaning in what the activity achieved in the lives of others. Digitally-mediated teaching reflected a commitment to an important personal value even if they did not find the activity itself inherently satisfying. Patrick Plunkett, for example, described how digitally-mediated teaching felt vastly different than he how he had originally imagined it. He contrasted his expectations and actual experience teaching online:

I thought there would be more interaction with students than there is. I thought that students would actually do the work, but they don't. I thought there would be a real need for it for some people, and there is. I thought that it would be a lot of upfront work and not much work to maintain it, but I was wrong.

He described his experience using the course management system as “awful.” Still, while he did not find satisfaction in many facets of his digitally-mediated courses, he found meaning in what the courses achieved in the lives of others:

There's a role for online classes. I've had some really good students here. And there are some students for whom this is a necessary course that is... they really can't do it any other way. I had one student early on who was dying of brain cancer. And she couldn't go to a regular class because she couldn't afford to be exposed to the health issues of other people. In fact, she did die that semester. I had one student who was serving in Iraq taking the class. I've had moms who have little kids at home during the day and can't take a regular class. I've had a variety of different people and these are all serious students. They actually did the work. They were doing well. So I think that one of the things I've learned is that there really is a role for the class. It can be a good learning experience, but it's not for everybody.

Professors like Drew Cleveland and Jeremy Hamilton believed their courses made a meaningful contribution to students who otherwise would not have access to their academic program. While he believed his course made a meaningful contribution to his department, he felt indifferent about continuing the activity if the social norms of his department shifted:

If the web were to go down tomorrow, I would be okay. “So now what do we do? Where do we go next?” Because it isn't like it's... I guess probably because I'm not an educator, I don't dig into, “Oh, let's try this and see what happens.” I don't go there.

Drew Cleveland described the grit required to teach his course, not enjoyment of the experience itself. He identified access as his primary motivation for teaching online: “Professionally it allows access and allows growth for the program, so that's the reason to do it.”

Professional Alignment. Other professors described digitally-mediated teaching as broadly congruent with their personal and professional goals. For them, digitally-mediated instruction aligned with important aspects of their personalities, teaching styles, or career

trajectories; it could be done within the bounds of normal academic routines. They chose to align with social norms of their department as a way of achieving their own professional goals.

Digitally-mediated teaching, for Shirley Even, provided more flexibility in how she invested her time. It allowed her to travel internationally, serve on community boards, and focus intensely on her course at times of the day that worked best for her schedule:

Another thing that I've thought about, but I still... I really enjoy teaching online courses, even better than face-to-face. And the reason, it takes a tremendous... listen, it takes much more time to teach online courses than face-to-face courses, but what I like about it is I can pace myself at home. I don't have to be in the office and here we don't have 9-5 jobs anyway, no professors have 9-5 jobs. But what I can do is to work on things. If I want to work straight through until 12 or 1 at night, I can. If I want to wake up at 4 o'clock in the morning and work on... I do that when I am grading students' assignments. I can do that even when I am making changes or developing my course. I can work very, very... I would say intensively without any disturbance whatsoever. And that's what I like about it.

Internet-based teaching complemented many of William Meredith's intellectual interests. He was "substantively interested in using technology in what [practitioner's in his field] do." He connected his experience teaching digitally-mediated courses with his substantive research on educating professionals to use technology in their work:

Substantively I'm interested very much in using technology in what [practitioner's in my field] do. As soon as the technology started to come I really started to figure out, how can I use this most effectively because it really did, gave me a chance to use what I know about technology and bring that into make a better environment in the classroom and not depend as much on my lecturing for 45 hours.

William felt tired and inconsistent in his face-to-face courses because oftentimes his courses were assigned at times that did not align with his "body clocks and body rhythms;" he was "not necessarily at [his] best." He contrasted his renewed passion for teaching with how he "used to hate" teaching face-to-face courses:

So the emergence of new technology, I think, has been, for me, a very fortuitous development... I used to hate [teaching face-to-face courses]. Literally - I used to

hate that. Now I don't. The best practices in online teaching, you don't put the students in front of their laptops for an hour lecture. You'll lose them. You don't do that. So that fits my style a little bit better.

Digitally-mediated teaching allowed Michael Duvall to use the programming skills he developed as an undergraduate computer science major; it also fit with his temperament. He described himself as “fairly introverted... I don't mind being alone in my office.” Digitally-mediated teaching expressed an important personal commitment that reflected his own experiences as a student: self-pacing. Digitally-mediated teaching reflected this commitment:

I generally like to make online courses as self-paced as possible, especially if someone has more time, they have complicated schedules, if they have a week with more time, I'd like them to be able to do two weeks of work. And that doesn't work face-to-face... I never liked being held back when I was ready to go ahead when I was a student. I didn't like the opportunity to go further when the course was ready to move on, and I was still stuck on a point. That sort of self-directedness. The online environment is really good at that.

Jason Reynolds described himself as “normally a quiet person.” In face-to-face teaching, he felt compelled to play a role that did not feel natural. Students frequently commented that he appeared “cold and distant” in the classroom; he attributed this to his quiet, reserved demeanor. In contrast to student impressions, he actually stretched himself in face-to-face interactions with students:

I am normally a quiet person, a reserved person, but I don't mind being silly and doing things that I wouldn't do outside the classroom, in the classroom. Sometimes I get on the evaluations... student say... oh, sometimes in the classroom he's a cold, distant guy, but in the classroom I am willing to transform a little bit of myself to make a better learning experience for the students. I think I'm explicit. I tell them what I want. I try to make sure that they know exactly what they are supposed to do. I can be systematic. So those are the types of things that I think are some of my strengths.

Although he was willing to “transform” himself in the face-to-face classroom, digitally-mediated teaching felt like a better fit for his personalities, teaching style, and professional goals.

He felt teaching multiple sections of the same course face-to-face felt “very mechanical” and “mind-numbing.” He did not enjoy repeating the same material time and again. Teaching digitally-mediated courses reflected his personality; it made teaching more interesting:

For me the benefits were obvious. First of all, I didn't have to grade, which it's a little but selfish, but it's part of the teaching. It frees some of my time to devote it to something else. So that is more rewarding for me and even more rewarding for the students in the long-term. It forces the student to think about the subject continuously. Not just one week, not just one day a week, but throughout the week. And actually, one of, a student, I recently read student feedback. Either [university student evaluations] or [a for-profit website with student evaluations] I'm not supposed to look, it's only for students, but I have an account. I periodically check. I had to lie [laughs]. A student wrote, one of the things he didn't like about the class was the quizzes, and the reason was the quizzes kept hounding her or him, or him, I don't know, kept hounding her. They would make her thinking continuously about the class because she had to take the quiz or she was not doing the quiz because she was thinking that she had to do the quiz. And I thought to myself, "Mission accomplished." That's what I want!

Innovative Endeavor. Some professors described more than alignment of digitally-mediated teaching with their professional goals; they also described inherent enjoyment of being innovators in their field; they searched for new ways of thinking about digitally-mediated teaching. Innovative endeavors involve an intrinsic interest in the activity itself. Professors reflect the social norms of the group; however, they also seek to create novel and imaginative ways of stretching social norms. They would continue teaching digitally-mediated courses, or find alternate expressions of the activity, in the absence of social expectations.

When I asked Stuart Widrick what resources supported his efforts to learn about digitally-mediated teaching, he replied, “The absolute first resource is that I had fire in my belly for it!” Unlike professors who felt compelled to teach online, Stuart emphasized that he found inherent pleasure in the activity itself:

This is from bottom-up. This is not top-down. This is because of my role as an educator – my interest in doing things innovatively. I continue to plod along on this. There's nobody at the Dean's office or my department that says, “[Stuart],

develop this.” My understanding of when people develop pretty useful and interesting online courses that’s the number one feature - you’ve got to have a champion, somebody who is just interested in doing that. If you force it on somebody, it just won’t work.

Evidence of a professors’ innovative enjoyment came from their moment-to-moment experiences in the activity: they found the activity personally meaningful in and of itself. Rather than a mindless repetition of the same experience, each semester created a new series of unique experiences that contributed to an endeavor beyond the course itself.

Stuart repeatedly shared how he derived immense personal satisfaction from spending time designing his digitally-mediated course. His desire to make a significant contribution to medical education, grounded in evidence-based practices, motivated his long hours. He dropped several anecdotes indicative of his commitment to this endeavor:

I just had the fire in my belly, I still do. Even last night I spent about an hour working on this. I want to spend time on it! So I was at home last night and my wife was out of town and I sat down for an hour and hour and a half, dinking around, adding some new content and thinking about it.

More than just aligning with professional goals, these professors described deriving personal enjoyment in the act of teaching, often in contrast to their experience teaching face-to-face courses. Derek Mederos, for example, felt miserable teaching face-to-face courses:

When I first taught, I was miserable. What I taught was actually really bad. It was partly because I felt like there had to be a persona, “This is how you teach.” It’s impersonal, very flat affect. After a while, it was like, “I just can’t do it!” because it wasn’t me. It wasn’t how I wanted to... there was nothing about me in that whole process.

Digitally-mediated teaching drew together his dispositions, teaching style, and professional goals. He described the experience as “a perfect alignment of interests, and opportunities, and things that resonate with me.” It substantively connected to meaningful aspects of his scholarly work:

To me online teaching is actually - it flows out of a lot of things that I'm interested in. So, many people don't like it, but I actually - I think it's me. It's me - I love computers. I love visuals. I love teaching. I love interactivity, games. All of that. So that subset - the strengths go along with the job.

Derek invested creative energy in developing his courses, admitting that he often got lost as he explored the different possibilities for this new form of academic teaching. He stressed an open-ended, discovery-oriented approach that continually introduced him to limitless possibilities for digitally-mediated teaching. He enjoyed exploring new technologies, new ways of teaching, and new perspectives on this form of academic work. His description of his expansive moods evidenced not only a complex understanding of technologies, but also an anticipation of encountering unexpected ideas and insights through his open-ended explorations:

But when I'm in an expansive mood and I'm able to take in new information - I get lots of ideas just flowing my way - like augmented reality - I'm super interested in that now. I'm going to incorporate it into a museum exhibit. So basically it's making these cross-links with - what are these cool things and actually can it be used for teaching. I actually find that stuff super interesting: "How do you think about this? How does this type of visual increase your ability to process information?" ... So usually at the beginning, I'll have this expansive view and then I'll shut it off just for survival. I won't be able to do what I'm doing and be thinking about those other types of possibilities... I think there's some weird judgment in my own... when I'm working on this expansive part it's like, "I'm not sure people know that I'm working!" Do you know what I mean? It's possible if I actually focused on it in a week, then I could get it done, because I'm allowed to be open with it, I actually just let it be more time than it needs to.

Summary. This section outlined the varying qualities of the experience professors described concerning engagement of one's self. Professors' experiences ranged from passive rejection, to dutiful obligation, to personal commitment, to professional alignment, to innovative flow. Table 4.5 identifies the kinds of experiences each professor mentioned in the interviews related to the engagement of one's self dimension. The first group primarily mentioned only futile resistance and dutiful obligations; surprisingly, no professors in this group mentioned personal commitment, professional alignment, or innovative endeavors. The second group varied

widely in their descriptions; no professors mentioned futile resistance. The third group primarily mentioned professional alignment; and two professors mentioned innovative endeavors.

Table 4.5

The Kinds Of Experiences Each Professor Mentioned In The Interviews Related To The Engagement Of Self Dimension

	Futile Resistance	Dutiful Obligation	Personal Commitment	Professional Alignment	Innovative Endeavor
<i>Group 1 (≤3 Years Experience Teaching Digitally-Mediated Courses)</i>					
Julianne Inniss		•			
Katheryn Roth	•				
Linda Scaff		•			
Nita Venturini		•			
<i>Group 2 (4-7 Years Experience Teaching Digitally-Mediated Courses)</i>					
Drew Cleveland			•		
Shirley Even			•	•	
Ellen Lloyd			•	•	
Gerald McQuade		•	•		
Derek Mederos				•	•
Patrick Plunkett			•		
Jason Reynolds				•	
<i>Group 3 (7+ Years Experience Teaching Digitally-Mediated Courses)</i>					
Michael Duvall				•	
Terry Eaton				•	
Jeremy Hamilton				•	
William Meredith				•	•
Stuart Widrick				•	•

Dimension 3: Engagement With Others

The *engagement with others* dimension explores the social bonds of digitally-mediated teaching. Professors encounter active, creative, biographical human beings in crafting a teaching experience; this dimension provides insight into how a sense of relatedness affects professors' digitally-mediated teaching experiences.

Professors, like all humans, strive for meaningful human connection and a sense of community with others. Digitally-mediated teaching is a social experience where optimal functioning involves experiencing a positive sense of relatedness, a social bond between a professor and a group of students. Social bonds, in this section, refers to a professor's relatedness to a group of students, not necessarily the development of personal or close relationships with individual students. With this conceptualization, a professor may teach a digitally-mediated course with two-hundred students, yet sense a connectedness of having shared a meaningful collective experience; another professor may teach a digitally-mediated course with eight students, yet feel isolated, where the experience is devoid of meaning and felt connection to a group of students.

A course affords a temporal connection with a diverse social community of students much different than a professors' typical encounters with academic peers. This temporary, but important, form of social bond necessitates a sense of shared experience. Such collective experiences can foster and deepen the meaning of the professors' relationships to a group of students, to teaching, and to their field of study. In this sense, professors' social experiences in a course extend beyond the necessities of covering the course materials; they may include a sense

of connectedness to the social life of the university or sharing contemporary social, political, and personal events with students. Table 4.6 outlines the varying kinds of the experiences professors described concerning the engagement with others dimension.

Table 4.6

Varying Kinds of Experiences Professors Described Concerning Engagement With Others

Engagement With Others	Description	Example Words and Phrases From Interviews
Isolated Estrangement	breakdown of social bonds between professor and group of students	miss, missing, isolating, hard, sad, bleh, annoying, alone, don't see, don't hear
Reduced Images	impersonal social bonds formed between professor and information about or images of students; little sense of shared experience	emoticon, avatar, divide, split, approximation, fill in the gaps, lose the richness, they're just data, lose the connectedness
Momentary Glimpses	weak social bonds form between professor and group of students; intermittent sense of shared experience	not as enjoyable, no one there, can't see their faces, a reminder they are human beings
Ordinary Encounters	social bonds form ordinarily between professor and group of students; ongoing sense of shared experience	actually know that person, fairly good sense, a little wondrous, enjoy seeing and hearing from the different people
Enriched Understanding	social bonds form between professor and group of students; especially meaningful sense of shared experience	amazing, powerful, rewarding, depth, more opportunities, less isolated, better sense, a lot of energy

Isolated Estrangement. Isolated estrangement involves the breakdown of social bonds between professors and students. For professors who prized connecting with a group of students, a lack of relatedness colored their entire experience. Despite acknowledging the benefits of digitally-mediated learning for students, Linda Scaff felt increasingly isolated in her academic work:

In some ways, online learning offers a lot for different students, but at the same time, you're sitting in front of a computer, and so the interaction factor is missing. It's not missing, it's just different.

When I probed Linda about what she meant by "it's just different," she shared how digitally-mediated teaching affected her ability to mentor graduate students. Faculty mentors had substantively contributed to her decision to pursue an academic career; yet, her hopes of mentoring graduate students conflicted with her actual experience as an early career faculty member. Rather than forming social bonds with students, she felt isolated and alone:

I'll just say that's it's been a little bit of an isolating process. Teaching online is a little bit isolating, maybe more so than teaching in a face-to-face environment. I think just because you're in your office and you have to close the door and put up a sign that says, "Do not disturb, I'm recording a lecture." It's a little bit isolating... I get excited still about the subject matter, but sometimes it can be hard to get feedback, "Are people... Are other students...?" And then you don't recognize people. I think it impacts my ability to network with students and maybe help them – be the mentor that sometimes I am to students.

Linda not only felt estranged from bonding with the students in her course; she believed the students were isolated from forming meaningful social bonds with each other. Linda reflected on her most meaningful experiences as a student and wondered whether the students in her courses lacked opportunities to sense the social bond she felt with her classmates. Linda reminisced how discussions with her classmates, most whom she never knew outside of class, still profoundly influenced her perspectives on the world:

I remember professors, but I also remember my classmates. It wasn't necessarily people that I became friends with after class, but I remember a lot of people from my undergraduate degree who were in my class. We really, I remember them. They had a pretty significant influence on the way that I look at things now.

Katheryn Roth began our conversation by describing how she took a personal interest in her students' career advancement, not just their performance in her class. She used her influence in national associations to help students build social networks and advance professionally. Many of her students were in the midst of significant life transitions, and she prized her ability to create a community of support. Mentoring distinguished her approach to teaching:

So I say to the students, "I care about you. I'm not just interested in the course. You are a person. You are part of the community. We have different phases in our lives that we go through. And this is just one of those phases."

Katheryn spoke in stark contrasts about her relationships with students in her face-to-face courses and her relationships with students in her digitally-mediated ones. Digitally-mediated courses, for her, replaced "the human element" with a mechanical feel: "Even though I teach this class, it's not that same enthusiasm. I mean, you teach it, you do it, you post it, bleh. They do it, you grade it." She felt totally cut-off from meaningful interaction with students, declaring, "I don't want to talk to a machine!" She explained how her feelings towards students had shifted from those of "care and concern" to "just feeling annoyed." She contrasted her attitude towards students in her digitally-mediated courses with her face-to-face ones:

I find that I don't have the same sensitivity to the students who don't start their work on time. It's like, "You should have your computer. Don't be calling me to ask me about how your computer works. You need to contact the computer center. I don't have time to sit here and explain it to you." So that's annoying to me, very annoying.

Her isolation extended beyond feeling disconnected from students in the course.

Katheryn felt increasingly isolated from her departmental colleagues. Interactions with

colleagues energized her; however, she felt increasingly separated from them: “You’re on your own in your online class. You’re on your own. Like go away. Leave me alone.” In her face-to-face courses, she used to invite departmental colleagues as guests to share about their research; however, teaching increasingly felt like a private endeavor, confined within the four walls of the home office in her basement:

When you're teaching online you operate more from home. You don't necessary see your colleagues. People said they hadn't seen me. I have a very nice office downstairs in my basement, everything I need is all down in my basement, so I don't need to go on campus for anything. If I'm not engaging other faculty in my course, I don't need to talk with them about anything. I'll see them at a faculty meeting, "How are you doing?" "Fine." "Bye."

Although interactions with students were mentioned by nearly every professor, some professors valued this aspect more than any other. Professors who highly prized social interactions also shared the strongest expressions of sadness and disconnection.

Reduced Image. Professors who described reduced images formed impersonal social bonds with students. Professors gathered images and information about students; however, they had little sense of an authentically shared experience with them. Despite their best efforts to piece together information about students, students did not feel like active, creative, biographical human beings.

Several professors described how they noticed themselves splitting a student’s “digital self” from their “in-person self.” Julianne Innis described a divide between how she knew students online and her encounters with those same students face-to-face. She pieced together information to construct an image of a group of students, but did so with an implicit sense that her image was incomplete, inauthentic, or completely inaccurate:

I feel connected to their online presence, but I guess there’s a part of me that divides them into who I see online and who they would likely be like if I was to meet them face-to-face.

She described this effortful, but unfulfilling, quality of socially connection as her “coping mechanism to get through teaching.” Shirley Evens believed she had lost something important in her interactions with students: “You really don't get to know students. You lose the connectedness with really getting to know students.” Patrick Plunkett, likewise, juxtaposed the vast amount of data he gathered on students with the relatively shallow impressions he had of them as real people. His interactions with students did not feel like engagements with alive human beings endowed with unfolding biographies. He confessed that digitally-mediated teaching led him to naturally view students as data, not real people:

I know more about the students online than I do about the face-to-face students in most cases because I can look and see what they've done. I know more about their habits online because I have all of the electronic data, so in some ways I know more about them, but they're just data, as far as I can tell, they're not real people.

Nita Venturini admitted she would be unable to match students' postings with their actual experience in her online course. Although she picked up on some emotional cues, like extreme frustration, she could not detect more subtle indications of confusion or distress. She felt particularly disturbed after discovering that she had failed to recognize that one of her online students felt significantly distressed throughout her course:

It was interesting because everybody has their own voice [in the help forum] in terms of how they express themselves. It's easy to pick out the person who was very frustrated with class because she expressed that. On the other class, at the end of class, when everything was all done, if you would have told me... I got more information at the end of class from the coordinator, she knew a lot of what was going on with the students, things I didn't know that were going on during the semester. If you would have had me match up the Q&A postings with the person's attitude and feeling about the course, I wouldn't have been able to do it accurately. One example, a person, petrified, horrified about class, almost to the point where they're physically getting sick, and I had no idea from the postings – nothing. So that voice and feel like you can pick up on things – not at all. So I find that to be a big issue.

Momentary Glimpses. Some professors caught momentary glimpses of the students taking their courses. They described weak social bonds between themselves and particular groups of students. Glimpse experiences involve evolving images of students, but an intermittent and uneven sense of shared experience. Professors developed a faint, but incomplete, understanding of students as alive human beings endowed with unfolding biographies.

Jason Reynolds began to incorporate asynchronous video essays in his course, not just for how the technology promoted student achievement, but also for how it enriched his sense of relatedness to the students in his courses. It gave him a fuller experience as a teacher:

The video essay is more work, but it helps me know my students better. It's been good for me. I like to be able to see their faces. It gives me a more complete perspective on my students. It gives me a fuller experience as a teacher. I know that they are human beings. It reinforces that they are not just numbers; they are people. It could be a robot, but, "No, it's not" because I can see the person.

Other professors also had experimented with media-rich forms of interaction to form stronger social bonds with the students in their courses. Even when media-rich interaction required more effort, professors, like Jason Reynolds, described it as "being worth the effort." Nonetheless, momentary glimpses still left professors, at the end the class, uncertain whether they had shared a collective experience, and unclear whether they had been alone or in the presence of others.

Ordinary Encounters. Other professors described ordinary social bonds forming between themselves and a group of students from an ongoing sense of shared experience. They sensed students as active, creative, biographical human beings. Ordinary encounters do not mean professors' interactions with students felt identical to face-to-face encounters; it simply suggests that professors' interactions allowed them to develop meaningful images of students as alive human beings. Derek Mederos developed a good sense of the students in his online courses:

I think what's really odd in the online setting is that, from emails and discussion forms, you actually know that person. People, not in online courses, think it's totally disembodied and you don't have any sense of who the student is. But you really... you can get a very interesting more connected response than I've actually had in some face-to-face courses. Because some people don't actually engage with you in face-to-face courses. It's the same thing with online, those that do, you actually get a fairly good sense of who they are.

Derek expressed a type of awe-like amazement at watching his digitally-mediated course unfold. The students in his course felt alive as they worked collaboratively with each other. Unlike professors who felt isolated from students, he found watching students engage in the course and with each other as “a little wondrous:”

It was actually - when you click 'turn on' the course - and nothing happens - and nothing happens for a couple of day- even three days - and you're like, "I just put all this work into this and I have no idea how it's going." And then it just starts rolling - they start doing what you ask them to do. It's really kind of - at times - it's a little wondrous.

Drew Cleveland expressed enjoyment from the possibilities new forms of interaction with students outside the region created. He said, “I’ve enjoyed it. I enjoy seeing and hearing from the different people, how would you say, their, where they’re coming from, where they’re trying to head, how they’re trying to make use of this [course] and go forward.”

Enriched Understanding. A handful of professors described enriched understanding where they formed strong social bonds with a group of students from especially meaningful shared experiences. Such experiences felt out-of-the-ordinary in everyday life, a typical class, or in their experience teaching digitally-mediated courses.

Ellen Lloyd, a professor in the medical professions, viewed an ethic of care as central to her approach to teaching. Reflecting back on the social bonds she had formed with students in her digitally-mediated courses, she said, “I’ve been really surprised. The first few years I was a

doubter.” She shared one example where a group students in her course offered evidence-based support to a fellow student grieving the sudden loss a family member:

It was the most amazing, powerful online discussion! And here, within the context of this course, they had this incredible experience where they shared. To me that kind of opened the door for me. I said, “Whoa, don't tell me students don't get connected!”

What distinguishes this account as enriched understanding is that Ellen Lloyd felt it was out-of-the-ordinary, something that would not have occurred under ordinary circumstances:

For me it was very rewarding. In fact, I don't think in a real classroom that ever would have happened, except in maybe a small group, but I'm not sure that would happen. And part of it is the anonymity. It frees you a little bit, sometimes.

Enriched understanding also occurred when professors felt like digitally-mediated teaching allowed them to give their best efforts to students. William Meredith believed that digitally-mediated teaching made him less isolated from students:

I feel less isolated from most of my students because, for those students, distance has been a reality and now distance is not a reality. It's not a factor anymore. I have a better sense of the class as a whole using the online tools than I did when I was teaching face-to-face. I might recognize the faces, but really only hear from five or six in most classes and then I'd get their assignments turned in. Now I have their pictures and as I'm going through and looking at responses, I will frequently go back.

It is William Meredith's description of having “a better sense of the class as a whole” that distinguishes his account as enriched understanding. He felt a stronger social bond teaching digitally-mediated courses than he did in face-to-face settings. He believed digitally-mediated teaching afforded the autonomy and flexibility for him to devote his best energies to students:

I am not necessarily at my best at the time that I would get a course assigned to me to teach. I really do think that we each have body clocks and body rhythms, and some times are better than others. And from 4-6 in the afternoon, if that's the time I was supposed to teach, that's not always going to be my best time. Even if students were saying more, I wouldn't necessarily absorb the cues. With 24/7 access, I'm getting in there at times that fit me and my style and my workflow

better. So I really do think that I have more opportunities to take in the data about the students than I would if I had a fixed time and a fixed day and you better be on from 6-9 at night. I have a better mental map of my class this way. It's not just there for those three hours once a week. That's the biggest for me. I like being able to have these images refreshed when I want them. In a face-to-face class, I can't do that.

Jeremy Hamilton designed his course “around a ‘community of learners’ concept” so his students could engage practitioners in the field. Digitally-mediated teaching created opportunities for forming new social bonds with colleagues in his professional community as well as with the students in his course:

I wanted to build this part in where they're actually interacting with people that they will become someday. And these people are providing me with real life examples. I'm providing the conceptual knowledge, the theoretical. They're providing me real life examples. I work with them to create the assignment to give to the students. The students have to apply what they've learned from me, give them an answer and get feedback from them. Now the interesting thing that's come about because of this is that sometimes the managers have learned from the students. Things they hadn't thought about. "I've never thought about doing it that way." They get a lot of creativity and a lot of energy.

Digital technology allowed him to create an out-of-the-ordinary social experience for students and professionals in his field. The course could meaningfully contribute to learning while connecting students with the professionals they aspire to be. These interactions wove meaningful connections, created positive interactions, and added to the meaningfulness of the experience.

Summary. This section outlined the varying qualities of the experience professors described concerning engagement with others. Professors’ experiences ranged from isolated estrangement, to reduced images, to momentary glimpses, to ordinary encounters, to elevated understanding. Table 4.7 identifies the kinds of experiences each professor mentioned in the interviews related to the engagement with others dimension. The first group varied widely in their descriptions, primarily mentioning reduced images and momentary glimpses. The second

group also varied widely in their descriptions; no professors mentioned isolated estrangement.

The third group primarily mentioned ordinary encounters and enriched understanding; no professors in this group mentioned isolated estrangement, reduced images, or momentary glimpses.

Table 4.7

The Kinds Of Experiences Each Professor Mentioned In The Interviews Related To The Engagement With Others Dimension

	Isolated Estrangement	Reduced Image	Momentary Glimpse	Ordinary Encounter	Enriched Understanding
<i>Group 1 (≤3 Years Experience Teaching Digitally-Mediated Courses)</i>					
Julianne Inniss		•	•		•
Katheryn Roth	•				
Linda Scaff	•	•			
Nita Venturini		•	•		
<i>Group 2 (4-7 Years Experience Teaching Digitally-Mediated Courses)</i>					
Drew Cleveland			•	•	
Shirley Even		•			•
Ellen Lloyd				•	•
Gerald McQuade		•	•		
Derek Mederos				•	•
Patrick Plunkett		•			
Jason Reynolds		•	•		
<i>Group 3 (7+ Years Experience Teaching Digitally-Mediated Courses)</i>					
Michael Duvall				•	
Terry Eaton				•	
Jeremy Hamilton				•	
William Meredith				•	•
Stuart Widrick				•	•

Meaningful Engagement

Digitally-mediated teaching affects professors' ways of engaging with their work, engaging valued aspects of themselves, and engaging with others. While these three strands of experience were treated separately in earlier sections, this section explores how these dimensions intersect and influence each other over time. In tracing professors' development, I highlight how digitally-mediated teaching affects professors' experience of teaching, jolting their identity into focus, surfacing the important functions of teaching within their lives and careers. Identity, for the purposes of this section, is defined as "an inner story of the self that integrates the reconstructed past, perceived present, and anticipated future to provide a life with unity, purpose, and meaning" (McAdams, 1995).

Professors bring to their work diverse professional backgrounds, curiosities and interests, and perspectives on teaching. A professor's professional identity reflects his or her understanding of his or her personal characteristics and how those characteristics have endured and evolved over time. Professors' identities imbue their the everyday activities with distinct meanings. Professors' experiences illuminate key things they care deeply about; therefore, this study illuminates more than just how professors "learn to teach", it illuminates professors' "learning about themselves as a teacher" and discovering what they care deeply about as it relates to teaching.

In discussing identity I move beyond the immediate, moment-to-moment felt experiences in professors' experiences teaching digitally-mediated courses and into how they make meaning of those experiences over time, in the context of their academic lives and careers. The exploration of identity brings the richness and nuance of their diverse experiences into focus. It suggests that new forms of digitally-mediated work not only affect how professors teach; they

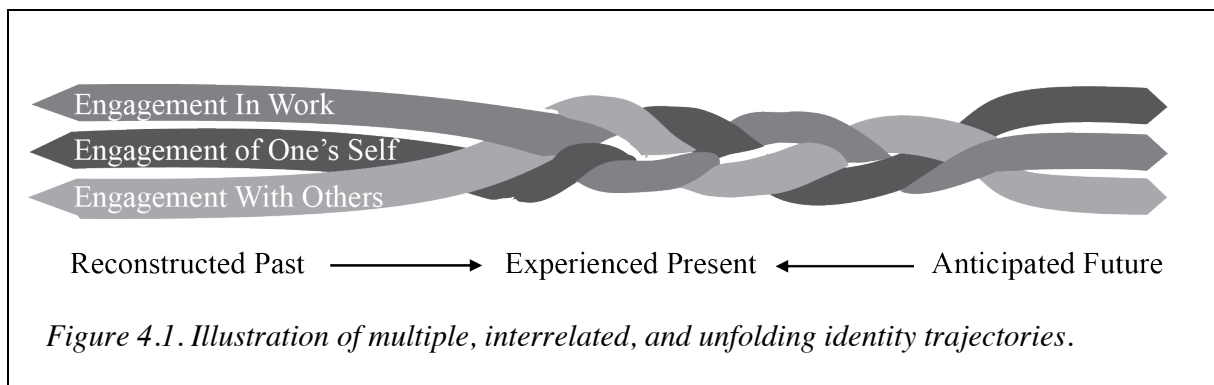
affect the nature, meaning, and organization of academic work. The stories of the professors in this study surface the lived complexities of identity and the connection between identity and professors' digitally-mediated teaching practices.

Identity Trajectories. Professors experiences took place on multiple levels simultaneously, producing an ever-thickening web of personal meaning. For some professors, their experience felt interwoven, ever-challenging, and fresh; it deepened their relationship to students and colleagues, and digitally-mediated teaching became a personally meaningful form of academic work. For other professors, their experience felt loosely knit, increasingly dull, and automatic; digitally-mediated teaching lacked personal meaning.

Digitally-mediated teaching reflects an unfolding history of practice that reaches back into the past, before a professor taught her first online course, and extends into an anticipated future. Professors shared images of academic lives they hoped for and the ones they feared. The meaning ascribed to any given experience, then, existed within the context of this reconstructed past and anticipated future.

Figure 4.1 illustrates how professors' experiences are multiple, interrelated, and unfold over time. The framework proposed by this study allows an exploration of how digitally mediated teaching affects professors' academic identities as constructed through evolving life stories. Consequently, it emphasizes how a professor's history of interactions along the three dimensions shape the personal meanings each brings to her or his own practice.

Immediate experiences unfold in a direction over time. Professors experiences have *trajectory* to the extent to which the three dimensions cohere. A professor's identity develops a momentum of its own and coherence through time. A "circular momentum" oriented Stuart Widrick towards what mattered and what did not, helping him choose between opportunities that



supported his trajectory and those that would impede or interfere with it. Stuart Widrick described a process of unfolding discovery through an evolving hermeneutic cycle. He sensed his ability to integrate digitally-mediated teaching into his academic life as a whole:

I do think there's almost a circular momentum if you will. You have a little success which breeds more validation, which motivates you to do more work, which might breed more success. That's the way I look at it... This totally integrates with my job... One of the things that I don't want to do right now is commit myself to something that doesn't integrate with what I'm doing on a regular, daily basis. Then almost everything I'm involved in right now integrates with all this stuff.

A sense of trajectory is not necessarily a succession of positive experience or a ladder-like, upward progression; even professors with established trajectories, like Stuart Widrick, experienced resistance in their efforts:

I would say for the most part it's really been trial and error, hit or miss. Responding to feedback, which hasn't always been pretty. Some of the feedback is "this is awful" from students. [Laughs].

Stuart Widrick experienced the ebbs and flows of moment-to-moment enjoyment; however, he willingly endured long periods of stress or uncertainty because he believed his efforts would make a meaningful contribution to medical education. He experienced a perpetually unfolding sequence of experiences, moving in a meaningful direction.

A professor's early experiences influence their later experiences. Unsatisfying, early experiences may affect a professor's willingness to continue to invest time into digitally-mediated teaching where new meanings could emerge. Linda Scaff believed digitally-mediated teaching distracted her from the substantive focus of her scholarly work. She felt her efforts to just maintain her digitally-mediated course had distracted her from accomplishing more substantive goals. Since she had taught online for a couple of years, I asked her to describe her experience as a whole:

Linda Scaff: It's constantly putting out fires. It's amazingly stressful. And it totally takes away from my time. Not only in my online classroom, but from everything else that I'm doing – like everything else that I'm doing.

Interviewer: Meaning?

Linda Scaff: Meaning writing grants, grading papers, attending meetings with my peers, having a full and clear mind about the topic that I'm supposed to be meeting with them about.

Linda feared that her incessant technological issues left students and departmental colleagues with the impression that she was incompetent:

My peers are probably curious about my capacity to teach online given the fact that I'm running around like a chicken with their head cut off trying to put out these fires.

She regretted missed opportunities to further her academic work: "I'm not going to lie. I've purposefully not applied for grants with September due dates because it's not going to work with my online course." When I asked who she trusted to share these raw experiences with, she replied, "I guess there is really no one that I trust. That's sad."

Linda's work felt scattered, her relationships with students felt shallow, and she felt obligated to teach online to meet departmental expectations. She had little meaningful experience to build on the next. She had lowered expectations for herself and the experience of teaching:

I'm really passionate about my subject and I was really excited about it, but I think some of the students said that they wouldn't take another class related to [my subject] because of this class, of my class the first semester, they were disappointed in it. So I think in some ways, it was met. I think the students didn't get as much out of it as I had hoped. Students get that much out of it. In that sense, I had low expectations there and that was kind of met.

Developmentally Meaningful Experiences. Particular experiences triggered forward movement in professors' development. I refer to these as developmentally meaningful experiences. Developmentally meaningful experiences are distinguished by their effect on the meaning of academic work along one of the three dimensions outlined in previous three sections. That is, the experience changed the way the professor engaged in their work (being engaged in work), related to students in their courses (being with others), or acted from interests and integrated values (being oneself). Table 4.8 summarizes the kinds of experiences that were developmentally meaningful for each of the three groups.

Table 4.8

Summary of Developmentally Meaningful Experiences By Group

	Group 1 ≤3 Years	Group 2 4-7 Years	Group 3 7+ Years
Developmentally Meaningful Experiences	Workshops, mentoring, and instructional design support	Formative feedback; diverse approaches and ideas	Connecting local efforts to broader discourses

Three years or less of experience teaching digitally-mediated courses (Group 1). The transition to teaching digitally-mediated courses involved a period of disequilibrium for many professors in the first group. Professors leave the world of three-dimensional time and space and direct attention into the two-dimensional world of a flat, glowing screen. In a face-to-face classroom, the physical objects of teaching exist in the ambient background of professors'

awareness most of the time. The objects of teaching, however, jolt into focus when professors teach their first digitally-mediated course. Professors who once felt adept at creating a teaching experience felt suddenly encumbered. They discussed experiences where familiar and time-trusted strategies felt strange and new. Several professors described their experience as a “trial by fire”:

Julianne Innis: [Laughs.] Trial by fire. Seriously. It was not good.

Ellen Lloyd: Being thrown into the fire, does that count? [Laughs.] Trial and error. Hit or miss. At least initially because there wasn't a whole lot out there, there weren't a whole lot of best practices there from the get go.

Derek Mederos: So I think that trial by fire was one of the biggest things. I think that the actual experience is the biggest teacher and it's mostly because it's the most painful.

Nita Venturini: So it was like, we're a huge university and you want us to do this stuff, but it seems all ad hoc too in trying to figure out what to do.

The kinds of learning experiences most meaningful for professors in transition were those that provided a strong support structure for exploring this new form of academic work. This support structure was often the company of instructional designers, colleagues and mentors in their department who shared their professional background, as well as the support of their departmental chair. This group worked to define a trajectory that connected their past teaching practices to seeing those practices in new ways.

In the early part of their transition, professors relied extensively on a small group of supportive people. People who supported professors' development came from a range of roles and responsibilities. They included an academic spouse, a neighbor who taught at a nearby community college, instructional designers, graduate students, and departmental colleagues. Professors expressed an appreciation for people who had responded to their questions non-

judgmentally, respecting their current ways of thinking and inviting them to explore new ways of engaging in academic work.

Instructional designers, especially in the first year, played a significant role in scaffolding professors' experiences. According to Jeremy Hamilton, most professors found it "difficult to know where to start." An instructional designer scaffolded Drew Cleveland's transition by asking the "right questions":

In getting [the online class] going – he was very helpful. He knew what needed to be in place better than I did, and he knew the right questions to ask and how to suggest it move forward. I told him what I was thinking, and he then said, "Okay, here's what we can do with this, this, this, and this and helped place and put things together."

Most professors wanted to explore the various possibilities for designing a digitally-mediated course. An instructional designer's openness to Derek Mederos' ideas let him explore new possibilities:

So my e-producer – I would say she was helpful. She was both supportive in a – she was good at giving me a broad range of things : "This is how it could be done." or "This is how it could be done." – but also super supportive in taking whatever I wanted to do. I would go to her and say, "This is what I'm thinking." And she would be like, "Okay, we can make it happen!" Do you know what I mean? Basically saying, being an enabler. So there was no – I got very little negative feedback: "You can't do that!" or "You shouldn't do that!" – to me that's what I run with. I actually don't care if people tell me that I can't do something, as long as people let me get past the idea phase. Let me mull it over.

The non-judgmental responses of others were also helpful for faculty members, like Shirley Even, who felt insecure using technology for teaching:

And [laughs] being a faculty member and with them being students, I guess one could feel... I can't think of another term other than insecure because you really have to open yourself up and say, "I don't know how to do this and know how to do that." But I have found those [instructional designers] to be wonderful.

The transition from face-to-face to digitally-mediated instruction also necessitated developing sustainable habits to incorporate digitally-mediated teaching into a professor's typical workday, work week, and semester. Professors' actions, at this point in their development, were prompted, modeled, or valued by significant others to whom they felt related. Professors identified with colleagues who were willing to share what motivated their own digitally-mediated teaching practices, including their perplexities, frustrations, and regrets. Ellen Lloyd, for example, described the critical role of mentorship in learning to teach digitally-mediated courses:

You really need to have somebody as a mentor or, I don't know if I would call it a mentor as much as another faculty person that is there as almost like a co-teacher initially for the first go through, and somebody that is available to talk to in terms of engaging the student component because that probably is not the person with the technology skills. It's somebody that's a teacher and educator who has experience. And then I think it's nice to have a little community group, an opportunity for you and other people to sit down together and say, "What were the hassles you had? What happened? Are you feeling okay about how much time you're spending?" To really get to share some of that because I think those are the things that you're sitting in front of your computer by yourself and you're thinking "I must be crazy but I am spending way too much time on this!"

Finally, Jason Reynolds, like several other faculty members, stressed how the financial support of his department chair "opened the road" for him to teach digitally-mediated courses:

Since I was just told that I was going to teach that class, I said, "Well, this is my chance. I'm going to tell my chair that I'm going to develop a different format for this class. I want to stay away from the big lecture room. I'm going to turn that Monday session into [an online course]." The chair thought it was a good idea. He gave me the money. He gave me one-thousand dollars to start thinking, to start developing that material. That's what I did for that year. That opened the road [for me].

Derek Mederos described how his chair enabled his personal vision for teaching digitally-mediated courses in a department where it was "out of the norm:"

My chair was a huge help. So our department is not visionary with regards to online learning, but [the chair] was actually already plugged into this as a

possibility... So really I had gone to him with the idea and he was ready to run with it. So he helped... So - [the department chair] has been very, super-supportive – both in the development of the course and “this is a path.” It’s been great.

In summary, professors in the first group expressed appreciation for learning experiences that provided a strong support structure for exploring this form of academic work. People who supported professors’ development came from a range of roles and responsibilities. This strong support structure guided professors by identifying with the difficulties they encountered; responding to their ideas with openness; broadening their support network; and helping them develop sustainable teaching practices. Together, this helped professors define a trajectory that connected their past teaching practices to seeing those practices in new ways.

Four to seven years experience teaching digitally-mediated courses (Group 2). The kinds of learning experiences meaningful for professors with a few years of experience with online teaching were those that exposed them to a diversity of perspectives. Professors in the second group more frequently explored more diverse ways of teaching digitally-mediated courses; they also expressed interest in being more critical of their own practices. For these professors, being exposed to a diversity of approaches, philosophies, and experiences was central to their development. Whether they engaged diverse colleagues in a one-time workshop, a monthly learning community, or through co-teaching, exposure to diverse perspectives allowed them to reflect on their teaching practices with fresh eyes.

Faculty who had spent a few years teaching digitally-mediated courses tended to be aware of the variety of viewpoints and perspectives regarding this form of academic work. The learning experiences that were most meaningful for them involved reflecting on and sharing about their practice with colleagues. Shirley Even said engaging diverse colleagues reflected “a philosophy that [she has] always had, and that is, being involved in multidisciplinary or

interdisciplinary work.” The one-week workshop she attended sparked new ideas for teaching her digitally-mediated course:

One thing that I can say that I have found to be one of the most interesting things was the one-week course I took on online teaching. The faculty who participated in that, at the end of the class, they had lessons that they had done and they were doing different types of lessons. That was very interesting! So that was helpful. All of the faculty members in this class were from all over campus, so it was all different types of disciplines – faculty from different disciplines who were participating.

Conversations with colleagues played a central role in professors’ development.

Professors, like Jason Reynolds, occasionally pursued more deliberate conversations with faculty colleagues from across campus. He stressed that talking about teaching with colleagues marked a turning point in his career:

I started participating in Faculty Learning Circles about online teaching. In that sense, that was also professionally, a turning point. I developed an interest in that case. That’s another way. So it just wasn’t just “teach a class;” but I started to talk about teaching, talk about online teaching with other people with similar interests – being invited to share my experiences about online teaching. In that sense, it was a turning point in my career at [the university].

For the faculty members who pursued deliberate conversations, the opportunity for reflective practice retained the same unstructured, open-ended qualities as serendipitous conversations. Deliberative conversations set aside space to let serendipity take form. Jeremy Hamilton valued the informal quality of the conversations in the faculty learning community he regularly attended:

I think it's the dedication that's there. It's just been a very friendly, willing to share group of people. I think it's because we enjoy the interaction we have with each other. What we've learned from each other.... Everybody is genuinely interested in what I have to offer and I'm genuinely interested in what they have to offer. It's just a very dynamic, interesting group.

Professors who attended the faculty learning community also cited opportunities to meet diverse colleagues as one of the most essential elements of that community. Jeremy Hamilton said the monthly meeting of the faculty learning community was “one of the few meetings that [he] enjoy[s] going to.” Jeremy continued, “We always learn something new from each other. I think one reason is because it is such a diverse group. It’s from all disciplines, all over campus. It’s a really diverse group.” He continued:

It's been great. I actually feel like I have a handful of peers that are also - they are in other disciplines, they approach things differently - I continually get great ideas from them about how to think about types of activities. It's just been great.

Professors like Jeremy Hamilton, Shirley Even, and Derek Mederos also expressed interest in realistic appraisals of their work and direct feedback via formative review of their courses. They all had submitted their courses to the campus teaching center and instructional design staff for comments and feedback.

Formative review by academic peers not only ensured the quality of their own course but also created an opportunity to learn about their colleagues’ teaching practices. Ellen Lloyd believed reviewing colleagues’ courses had allowed her to discover new digitally-mediated teaching practices:

You have to, as a reviewer – we have a primary reviewer, that person brings it to the whole group. That person has to get into every nook and cranny in the course. Sometimes you find things like, “Oh, I wish I would have done that in mine.” It is a way of learning other techniques, or other teaching strategies that you hadn’t thought of because you’ve seen that work in another class so you can adopt those. It’s a good thing.

In summary, professors in the second group expressed appreciation for learning experiences that exposed them to a diversity of perspectives. They appreciated opportunities for sustained and substantive conversations with diverse colleagues that engaged the personal and professional dimensions of this form of academic work. For these professors being exposed to a

diversity of approaches, philosophies, and experiences allowed them to reflect on their teaching practices with fresh eyes.

More than seven years experience teaching digitally-mediated courses (Group 3). The kinds of learning experiences most meaningful for professors in the third group were those that connected local efforts to broader discourses on digitally-mediated teaching. Professors in the third group were much more focused on scrutinizing broader trends of digitally-mediated teaching at the university and in their fields of study. Many had experience teaching distance courses well-before the prevalence of asynchronous, internet-based courses hosted on course management systems.

Professors who had spent several years teaching digitally-mediated courses recognized the expertise they had developed and appreciated opportunities to apply and share what they had learned with colleagues. These professors often facilitated group interactions about digitally-mediated teaching with faculty colleagues in their department or at the university. They described themselves as “the online person” in their departments. Professors, like William Meredith, voluntarily informed colleagues if they became aware of ideas and approaches relevant to their colleagues’ teaching practices.

Most of these professors had served on university- and national-level committees on digitally-mediated teaching. Like colleagues with a few years of experience, they sought feedback; however, in addition to feedback from colleagues at the university, they were more likely to have presented at a national conference or published peer-reviewed journal articles. When I asked Terry Eaton what sources of information he found valuable in his digitally-mediated teaching, he responded:

Going to [committee meetings at a multi-university national organization] were absolutely invaluable because people would spill their guts there. They would

really tell the truth about what's working and what's not. Not always on as big of an issue as a course management system, but other issues that were also important. So the [national organization] group provided great information on what was going on at other institutions.

A handful of professors engaged faculty colleagues at other universities in creating national-level standards for digitally-mediated learning in their field. William Meredith, who chaired a national e-learning subcommittee in his field, believed such conversations were “fascinating”:

On my [national e-learning subcommittee] I have brought together a lot of these knowledgeable people in online learning in [my field], so that’s another peer group. So we’ve been having some fascinating discussions with some of those folks.

Summary

In this chapter, I have argued that new technologies not only change the practices of academic teaching; the changing practices affect a professor’s experience of teaching itself. A deepened understanding of how digitally-mediated teaching affects a professor’s experience of teaching is the main contribution of this study. The proposed framework outlined three dimensions of experience the professors in my interviews inevitably confronted when teaching digitally-mediated courses: engagement in work, engagement of one’s self, and engagement with others. This chapter cited examples from the professors in this study to illustrate each of the three dimensions. The next chapter provides a discussion of the results and implications for practice and further research.

CHAPTER 5: DISCUSSION

This research study examined how professors at a single research university learn to teach digitally-mediated courses and focused on what learning meant to them subjectively, within their professional lives. I explored the specific activities, qualities of social interactions, and intersecting contexts that support professors as they learn to teach digitally-mediated courses. I utilized a definition of learning informed by sociocultural theory and advanced within the communities of practice literature, defining it as “the interplay of experience and competence” (Wenger, 1999, p. 50).

In recent years, higher education researchers have encouraged a renewed emphasis on institutional qualities that encourage faculty professional development (Gappa et al., 2005, 2007) and a focus on faculty professional growth (O’Meara et al., 2008) with an explicit emphasis on faculty learning as a core aspect of professional growth (Lattuca & Creamer, 2005; Neumann, 2005, 2009a; O’Meara et al., 2008). This study responds to that call by placing questions of meaning and purpose at the center of the conversation about the proliferation of digitally-mediated courses.

My focus on professors’ learning draws needed attention to the subjective dimensions of the technological transformations of our time, particularly how they are reshaping academic work and the human relationships vital to learning. Such perspectives are essential if universities are to negotiate these transformations in ways that not only support the faculty members who teach at their institutions, but also provide practical and meaningful opportunities for learning and professional growth. Sociocultural perspectives on learning, in particular, accentuate how intelligent practice develops through the interplay of human activities, relationships, and socio-cultural contexts. Professors learn through everyday interactions with their environments (Fogel,

1993). Lave (1988) stresses this point, arguing that, “what we call cognition is, in fact, a complex social phenomenon” (p. 1).

In the subsequent sections of this chapter, I highlight key findings and discuss how they contribute to a growing body of research on faculty professional growth (O’Meara, Terosky, & Neumann, 2008) as well as to conceptualizing online teaching from a faculty learning perspective (Lattuca & Creamer, 2005, Neumann, 2009). I identify specific recommendations for how higher education institutions might embed learning in professors’ everyday interactions. I conclude by recommending several directions for further research.

Summary of Major Findings

The proposed framework outlined three dimensions of experience the professors in my interviews inevitably confronted when teaching digitally-mediated courses. Chapter 4 used accounts from the professors in this study to illustrate each of the three following dimensions:

The *engagement in work* dimension explored the physical interactions of digitally-mediated teaching. Professors engage physical objects and settings in creating a teaching experience; this dimension provided insight into how the aesthetic qualities of the immediate environment affect professors’ digitally-mediated teaching experiences.

The *engagement of one’s self* dimension explored the personal meanings of digitally-mediated teaching. Professors express distinct personalities, teaching perspectives, and professional histories in creating a teaching experience; this dimension provided insight into how individual differences affect professors’ digitally-mediated teaching experiences.

The *engagement with others* dimension explored the social bonds of digitally-mediated teaching. Professors encounter alive, biographical, creative human beings in creating a teaching

experience; this dimension provided insight into how a sense of relatedness to others affects professors' digitally-mediated teaching experiences.

Professors' experiences were multiple, interrelated, and unfold over time. The framework proposed by this study allowed an exploration of how digitally mediated teaching affected professors' academic identities as constructed through evolving life stories. Consequently, it emphasized how a professor's evolving history of interactions along the three dimensions shaped the personal meanings each brought to her or his own practice. It emphasized the development of functional relationships, not the integration of different types of knowledge, as a central feature of professional growth. It viewed engaging the tensions of digitally-mediated teaching as the primary means of supporting professors' professional growth.

Discussion of Results

An increasing proportion of academic work takes place in liminal spaces (Turner 1974) where professors' physical and virtual lives converge (Turkle, Gusterson, Dumit, Mindell, & Silbey, 2005). The findings of this study illustrate how digitally-mediated academic work raises more than technological questions; it also raises critically important personal and professional ones (Carr, 2010; Turkle, 2008). Humans experience both subjective well-being and optimal functioning when they are doing what they would choose to be doing, doing it well, and connecting with others in the process (Ryan & Deci, 2000; Nakamura & Csikszentmihalyi, 2002). While existing research emphasizes how professors use technology for teaching (Mishra & Koehler, 2006), it gives less attention to how the use of technology affects professors' subjective sense of themselves and engagement in academic work.

The findings of this study draw urgent attention to the profound implications of technological transformations on professors' professional worlds and identities. Rhoades (2011)

argues that the academy is undergoing a “significant renegotiation of educational space” and “of faculty’s position within that space” (p. 92). Calls to “hack the academy” (Suiter, 2011) or “change the DNA of higher education” (Christensen & Eyring, 2011) garner public attention by arguing that the world has “irrevocably, cataclysmically, epistemically changed” (Davidson & Goldberg, 2009, p. 19); yet, professors’ educational authority is less central in this vision for learning in higher education (Hacker & Dreifus, 2010; Paulson, 2002).

Emerging technologies introduce new meanings into the act of professing itself, not just new possibilities for course design. While researchers often stress professors’ efforts to develop courses that enhance student learning, professors also seek to enhance their own experience teaching-with-technology. Viewed as a whole, authoring personally meaningful approaches to digitally-mediated teaching involves much more than developing skills or integrating technology; it involves approaching one’s academic life as an ongoing act of self-creation.

This study locates digitally-mediated teaching in the context of academic work. The findings highlight how the technological transformations of our time affect academic work and the human relationships vital to learning. I believe this dissertation makes two important contributions to research on digitally-mediated teaching practice. The findings highlight the importance of understanding digitally-mediated teaching through (a) the narrative dimensions of professors’ learning and professional growth and (b) the craft of knowledge work in the digital age.

The narrative dimensions of professors’ learning and professional growth. This study highlights the narrative dimensions of professors’ learning. Narrative, as a metaphor for the developing self, “sees developmental change as experienced thru the ongoing construction and reconstruction of life narrative” (Rossiter, 2003, p. 1). Professors are active, creative

biographical human agents (Gjerde, 2004); they are the protagonists of their own learning and professional growth (Parrish, 2009). Development involves a kind of re-storying of the self within the context of online teaching practice (Wenger, 1998). A key emphasis of a narrative as a metaphor for the developing self is the idea that professors exercise agency in guiding their own development (O'Meara & Campbell, 2011; O'Meara, Terosky, & Neumann, 2008). The findings draw attention to the choices professors make as part of *authoring academic lives of meaning and purpose*.

Digitally-mediated courses not only change how professors teach; they shape professors' experience of teaching, often revealing images of academic lives professors hope for and ones they fear. From a narrative perspective, professors' emotions provide insight into the wholeness of their experience (Clark & Dirks, 2008; Neumann, 2006); they illuminate professors' hoped for and feared possible selves (Clark & Rossiter, 2008; Rossiter, 2007). While professors expressed concerns about integrating technology and technology (Mishra & Koehler, 2006), they also described concerns about the professional and personal dimensions of this new form of academic work.

When scholars and practitioners talk about what professors do, they might describe how professors create a course syllabus, author journal articles, or write grant proposals. These phrases all point to the tangible products of academic work. This study focuses on who professors are creating in the process of doing the work of a professor. It locates self-creation at the heart of professors' learning. Some professors felt untethered in their efforts to author academic lives of meaning and purpose; other professors felt listless, even deeply sad at times, tethered to a script written by someone else. Professors' descriptions included intense emotions of loss, isolation, loneliness, anger, frustration, sadness and grief, alongside emotions of trust,

enjoyment, joy, and anticipation (Kaptelinin & Nardi, 2009). Professors experienced many emotions simultaneously, including curiosity and anxiety, or fear and trust.

Professors' work is often framed in terms of its meaning for others (Neumann, 2009). For example, professors' teaching benefits students or professors' research benefits society. A narrative approach, however, illuminates more than just "the benefits" of professors' work for others; it highlights how professors' work contributes to their own self-creation. Although what professors do certainly contributes to society, I believe a focus on this contribution alone is incomplete. Professors first find meaning in their work for themselves (Neumann, 1998) then communicate that meaning in activities like teaching students or publishing research. Thus, a narrative approach to understanding professors' learning considers both what professors do as well as the selves they create in the process.

Self-creation is not something professors do alone (Lave, 1996); the construction of a life narrative is relational in nature (Clark & Rossiter, 2008). Professors' relationships with others are "alive and changing" (Fogel, 2003, p. 5). The findings of this study emphasize the developmental significance of relationships in learning to teach digitally-mediated courses. Supportive others help professors negotiate a desire to preserve the best qualities of their teaching with their desire to grow both personally and professionally.

Learning involved a diversely expressed, multifaceted approach for each professor. Learning is a multifaceted, open-ended process, much like an unfolding conversation within oneself, with others, and with one's work. Learning as developmental change arises in an ongoing dialogue among diverse voices (Fogel, 1993; Hermans, 2001). Self-creation involves making sense of these diverse perspectives and points-of-view – both inside and outside the person – to develop new understanding (Hermans, 2005).

The craft of knowledge work in the digital age. This study also highlights the craft of academic work in the digital age. Academic work is generally characterized as *knowledge work*. The term knowledge work suggests the creation of abstract ideas occurs separated from the nitty-gritty of physical materials; however, knowledge work necessitates the interaction with real objects. Teaching is a craft founded on skills developed to a high-degree, practiced time and again (Lave, 1996; Sennett, 2008). It builds on slow learning and refined habits. The image of academic teaching as craft stresses that, for professors, thinking is in the making (Brown, Collins, & Dugid, 1989; Dewey, 1933). Classrooms are not just contexts for student learning; they are also contexts for professors' learning and self-creation (Neumann, 2009, Terosky, 2005). Professors dedicate themselves to a lifetime of learning. Academic work, then, is not only an ongoing experiment testing new ideas and theories, but also an open-ended experiment testing possibilities for one's academic life.

The findings of this study suggest that new technologies not only change the practices of academic teaching but the changing practices of teaching also affect professors' experience of teaching itself. Clearly the technology in professors' hands continues to evolve yet professors also evolve through their use of it (Kaptelinin & Nardi, 2009). Thus, new technologies raise questions about professors' professional identity, sense of collegiality and community, and what it means to profess on the screen (Wenger, 1998). In the midst of the vivid accounts of professors' hopes and fears, several participants exclaimed, "I'm not a techie!" The etymology of the word 'technology' is the Greek word *technê*, meaning "the knowledge of how to do things and make things" (Harper, 2012). Thus, *technê* is often translated as craftsmanship, craft, or art; it does not mean machine. Teaching-as-craft invites humans to undertake work in order to shape and make something of value. Professors, like craftsmen, dedicate themselves to lives

where they refine skills of their work (Brown, Collins, & Dugid, 1989; Lave, 1996; Sennett, 2008). At one level, professors' personal declarations about their lack of technological expertise might suggest professors do not see themselves as "keeping up with the latest technology."

However, I believe it equally describes their understanding of academic life: professing cannot be reduced to technical work; technology is a medium to practice the craft of academic teaching.

Implications for Practice

Professors' identity trajectories develop as they learn what matters, engage productively with others, and appropriate resources developed by a community of practice (Wenger, 2010). Like other complex organizations, higher education institutions must consider how to organize for learning (Ewell, 1997) in order to build scholarly communities that support faculty learning and professional growth (O'Meara, et al., 2008). This section offers specific recommendations so digitally-mediated teaching becomes an increasingly shared enterprise, not solely an individualistic – or even isolating – endeavor.

Meaningful change cannot be limited to the efforts of a handful of faculty members or departments; the coordination and communication of whole communities of practitioners is essential. Individualistic approaches focus solely on helping faculty members master the competencies new forms of digitally-mediated academic work require. These approaches, however, fail to fully recognize how additional responsibilities affect the nature, meaning, and organization of academic work. Senior administrators and faculty members must work together to identify the best possible contributions faculty members may make towards the goals for digitally-mediated instruction at their institution.

Huber and Hutchings (2005) describe a teaching commons as a space where "communities of educators committed to pedagogical inquiry and innovation come together to exchange ideas

about teaching and learning and use them to meet the challenges of educating students for personal, professional, and civic life” (Huber and Hutchings, 2005, p. x). To create a digitally-mediated teaching commons, I recommend three proposals at the department, institutional, and national levels respectively:

- Department-level: The creation of differentiated workloads recognizing different contributions towards digitally-mediated teaching responsibilities in each department.
- Institutional-level: The development of inquiry-based cohorts around a digital-mediated teaching commons.
- National-level: The modification of course management systems to support professors’ learning about their own digitally-mediated teaching.

Departmental-level approaches: The creation of differentiated workloads recognizing different contributions towards digitally-mediated teaching responsibilities in each department. The creation of a digitally-mediated teaching commons begins in departments. Departments, especially in research universities, are the primary sites of faculty socialization, standards of productivity, and professional identity (Blackburn & Lawrence, 1995; Tierney & Bensimon, 1996). They are a professor’s primary social community that defines the ideals of quality and good work. This study highlights, yet again, the critical role that department chairs, senior colleagues, and departmental norms play in supporting professors’ academic work (Blackburn & Lawrence, 1995; Tierney & Bensimon, 1996). Departments, as a whole, must consider how to share, reward, and support high-quality online teaching. Departmental leaders and faculty members must work together to create supports for new forms of digitally-mediated academic work, and identify the best possible contributions different faculty members may make to their department.

Digitally-mediated teaching could be recognized as a departmental-level responsibility, where each faculty member makes a different contribution towards departmental goals. Department chairs could work with individual faculty members to construct differentiated workloads rather than expecting all faculty members to take on equal responsibilities. With this approach, departmental colleagues would vary in the extent to which they integrate digitally-mediated teaching into their academic work and careers. Ideally, the goals for teaching online courses could be met by faculty interested in dedicating the scholarly effort high-quality teaching requires.

A department chair, for example, could recognize a faculty member's interest in digitally-mediated teaching by adjusting her academic workload to fully acknowledge the investment high quality work requires. The department chair could designate a portion of a faculty member's service appointment (e.g., 5 percent) towards supporting the department's digitally-mediated teaching responsibilities. In addition to developing her own courses, a faculty member with this appointment could stay abreast of research on digitally-mediated instruction in her field, build networks across campus by attending institution-wide events, and use her knowledge to consult with departmental colleagues about their digitally-mediated courses. The professor's appointment would fully recognize the importance of this boundary spanning role for the department to reach its goals for high-quality teaching.

How digitally-mediated teaching is accounted for in promotion and tenure also matters. If a faculty member chooses to make digitally-mediated teaching a significant aspect of their departmental workload, promotion and tenure review should mark the point where the results of their efforts are recognized and rewarded in full. Several professors in this study mentioned that digitally-mediated teaching was risky: it involved learning new approaches to teaching; it took

more time; and it met with mixed responses from faculty colleagues. Digitally-mediated teaching must be valued in systems of faculty evaluation if it is to be recognized for the contribution it makes to a department. This necessitates recognizing that a well-designed digitally-mediated course is a piece of serious intellectual work, not equivalent to a traditional face-to-face course.

Differentiating the workload for digitally-mediated teaching among professors within the same department offers a number of advantages. Differentiated workloads ensure that digitally-mediated academic teaching projects are built around motivated individuals by tapping into what professors find most rewarding about their work; they recognize the contributions of dedicated individuals to departmental responsibilities as a whole; and they allow professors to author diverse pathways for integrating digitally-mediated teaching into their academic careers (Brand, 2000; Lindholm, 2004; Reybold, 2005). Recognizing and rewarding boundary spanning efforts would create sustainable, evidence-based approaches to digitally-mediated teaching contextually sensitive to the standards for quality in each department.

Institutional-level approaches: The development of inquiry-based cohorts around a digital-mediated teaching commons. Second, campus teaching centers are key players in the development of a digitally-mediated teaching commons. In proposing new practices for teaching centers, I draw heavily on the strategic approaches to institutional change utilized by the Scholarship of Teaching and Learning (SoTL) movement (Hutchings, Huber, & Ciccone, 2011). Cohort models are ideal vehicles to support inquiry-based learning to support faculty learning and professional growth (Bernstein & Bass, 2005; Richlin & Cox, 2004). They could be formed at the college or university level, depending on where the instructional design and faculty development units are located at the institution. Cohorts would share SoTL's commitment to critical reflection, systematic inquiry, making work public, and peer review (Hutchings, Huber,

& Ciccone, 2011; Richlin & Cox, 2004), although they would reflect these commitments in developmentally appropriate ways. I propose a three-tiered, cohort model approach:

Tier 1: Course-focused cohorts. Course-focused cohorts would support faculty in developing a holistic approach to digitally-mediated teaching, including the three dimensions highlighted by this study. The cohort would be designed to support professors' learning and professional growth as they transition to digitally-mediated teaching. As the name suggests, the focus would primarily be on the nuts-and-bolts of developing a sustainable, high-quality course that works within the context of a professor's life and career. Professors in these cohorts would practice good teaching where professors consciously value the creation of high-quality learning experiences (Bernstein & Bass, 2005; Hutchings & Shulman, 1999).

The semester prior to the start of their first digitally-mediated course, the university would proactively invite the professor to join this course-based cohort. The cohorts would remain small, being made up of a pair of professors and a pair of instructional designers. Cohort members would not just offer advice to one another, but actively work alongside each other in the creation of their courses, each contributing their own form of expertise. Outside of working meetings, instructional designers would work collaboratively to design inviting user interfaces, multimedia, and mechanisms for professors to track student experiences in their course.

Issues of identity come into focus and are more salient, particularly in moments of transition; therefore, professors' experiences in the course itself would be the primary focus of systematic inquiry. Professors would assess how the experience affected their engagement in meaningful work, relatedness to students, and identity as a professor. They would be encouraged to remain sensitive to these dimensions of their experience, monitoring the ebb and flow of the quality of their experience throughout the semester.

Making one's work public would simply involve sharing their experiences with other members of the cohort. Similarly, peer review would be low-stakes: professors could invite feedback on their experience from one another. The feedback, ideally, would reflect qualities that contributed to developmentally meaningful experiences for the professors in this study where cohort members respond to each other's ideas non-judgmentally, identify with each other's difficulties, discuss role models and sustainable practices, and broaden each other's networks of support.

Tier 2: Case-focused cohorts. Case-focused cohorts would support faculty in making case studies of their existing digitally-mediated courses. The cohort would be designed to help support professors learn more about their own and others' digitally-mediated teaching practices. The purpose of this cohort would be to provide insight into the concerns and commitments that motivate diverse approaches to digitally-mediated teaching. Professors in these cohorts would practice scholarly teaching, that is, taking a scholarly approach to teaching just as one would take a scholarly approach to other areas of knowledge and practice (Bernstein & Bass, 2005; Hutchings & Shulman, 1999; Richlin, 2001; Richlin & Cox, 2004; Shulman & Hutchings, 2004).

Systematic inquiry would focus on articulating the purposes of an existing course. Like the course-focused cohort, professors would work in small teams (4-6 people), helping each other inquire into the core concerns and commitments that motivate their digitally-mediated teaching practices. Exposure to ideas and approaches far different from their own would enable professors to see their own assumptions about digitally-mediated teaching in sharper relief. Thus, engaging diverse ideas and alternative approaches would not only open professors to a broader range of possibilities, it would allow them to reflect on their own practices with fresh eyes. Dialogue

would present an opportunity to create a particular sort of common ground, naturally formed when professors sense analogous aims and practices.

Making work public would involve sharing their courses as case examples outside of the cohort, such as with their department or at scholarly symposiums at the university. The institution could also embed case examples from the cohort in the university's course management system. This way, professors who did not participate in the cohort could still discover diverse forms of digitally-mediated teaching practice at the university. This would not only make promising innovations known, it could serve as a way for the institution to publicly recognize professors for high quality teaching. Over time, the case examples would create a documented history of good practice; and it would create a resource other professors could draw on in the future.

The professors in this study valued formative feedback on their courses. Professors in a case-based cohort would receive documented, formative review of their courses from colleagues steeped in research on evidence-based digitally-mediated teaching practices. Documented, formative feedback could stimulate new ideas for teaching. Additionally, it would also provide evidence for professors to include in their promotion and tenure review portfolio.

Tier 3: Scholarship of teaching-focused cohorts. Scholarship of teaching-focused cohorts would support faculty in the design of research studies related to digitally-mediated teaching. Unlike course-focused and case-focused cohorts, the focus of inquiry would not be on a particular course; inquiry would focus on significant questions related to digitally-mediated teaching in their field. Professors in these cohorts would practice the scholarship of teaching where their research is exchanged with members of their professional communities for critique and peer-review (Huber & Hutchings, 2006; Richlin, 2001).

Professors would select a particular teaching intervention and identify ways to measure its outcomes, rather than simply offering an anecdotal evaluation of its success. Digitally-mediated teaching is particularly amenable to this type of inquiry since it naturally produces a variety of forms of evidence that documents effective teaching in ways face-to-face verbal exchanges do not. Professors could share the results of inquiry at university events, national conferences, or in peer-reviewed publications. Anonymous reviewers for conferences and journals would determine the relative merits of the scholarship in advancing knowledge related to digitally-mediated teaching in their respective fields.

National-level: The modification of course management systems to support professors' learning about their own digitally-mediated teaching. Finally, software designers are key partners in creating a truly interconnected digitally-mediated teaching commons. It is critical to amplify the voices of faculty in the creation of tools that embed professors' learning about their own online teaching directly within their experience on the screen. Course management software developers have a stake in discovering how professors experience their platforms and use those platforms to learn about the effectiveness of their own teaching.

Professors' repeated interactions on the screen, over time, affect how they understand themselves, relate to students, and experience academic work. Therefore, the emphasis of these conversations should incorporate the full dimensions of professors' experiences. The aesthetics of the screen, for example, could directly reflect the humanity of students, emphasizing human faces, not files and folders. Organizing professors' experiences around students could help professors to develop more integrated, evolving images of students and their progress in the course. Additionally, professors take calculated risks when data support doing so and they are less likely to experiment with no supporting data or poorly collected data. Course management

software developers could create tools that more easily allow professors to frame questions and collect data relevant to those questions. Data could be represented in visually inviting ways and could be located more directly within professors' daily work on the screen. Besides immediate feedback, such tools could help professors monitor their own progress and develop more realistic, incremental approaches to adjusting their online teaching practices.

Implications for Theory

This study contributes to theory development by examining the analytic notion of an identity trajectory in the community of practice literature (Wenger, 1998), particularly as it relates to the development of an identity trajectory for academics. This study's findings provide broad support for the analytic notion of an identity trajectory. At the same time, the findings suggest further considerations for community of practice theory. Specifically, the findings suggest the importance of unpacking what gives an identity trajectory its moment-to-moment motion, particularly in relation to the fulfillment of basic psychological needs (Ryan & Deci, 2000).

Wenger (1998) uses the term *trajectory* to suggest “not a path that can be foreseen or charted but a continuous motion – one that has a momentum of its own in addition to a field of influences. It has a coherence through time that connects the past, the present, and the future” (p. 154). The notion of identity trajectory has been used to analyze doctoral education (McAlpine & Amundsen, 2011) and early career faculty (Jawitz, 2009). Existing research provides broad evidence that identity trajectories are given motion by academics' immediate social worlds, particularly the social field within departments (McAlpine & Amundsen, 2011; Jawitz, 2009). This study's findings also provide broad evidence that professors' identity trajectories are given motion by a social field of influences. The professors in this study shared accounts of negotiating

conflicting social roles (i.e., multimembership) and their relative desire to take on new forms of participation in the future (i.e., paradigmatic trajectories). These distal social processes give motion to their identity trajectories over long periods of time.

Additionally, this study's findings suggest that proximal, moment-to-moment experiences also animate professors' identity trajectories. Specifically, academic identity trajectories are given motion by the "pushes" of proximal, shorter-term dynamics that arise within a professor's immediate experience, as well as the "pulls" of distal, longer-term social processes. Wenger (1998) acknowledges the continuous interplay of intrapersonal and social processes along multiple time scales; however, community of practice theory tends to emphasize long-term, distal social processes that give motion to identity trajectories. While the professors' identity trajectories in this study were given motion by multimembership and paradigmatic trajectories (Wenger, 1998), they were also given motion by the desire to satisfy basic psychological needs (Deci & Ryan, 2000) in the successive sensations of moment-to-moment experience (Dewey, 1934).

Considerable research in multiple fields and across cultures now supports the meditational significance of psychological need-satisfaction (Deci & Ryan, 2000; Ryan & Deci, 2008). Deci and Ryan (2011) describe basic psychological needs as "essential nutriments for healthy development and psychological well-being" (Sheldon, Cheng, & Hilpert, 2011, p. 19) like sun, soil, and water are for plants (Sheldon, 2004). Humans experience both subjective well-being and optimal functioning when they are doing what they would choose to be doing (autonomy), doing it well (competence), and connecting with others in the process (relatedness) (Ryan & Deci, 2000; Nakamura & Csikszentmihalyi, 2002). The extent to which psychological needs are

met, as felt by the person in the moment, gives motion to what a person moves towards and what they avoid (Deci & Ryan, 2011).

The three dimensions identified by this study – being engaged in the work, being one’s self, and being with others – map onto the three basic psychological needs proposed by self-determination theory respectively, i.e., competence, autonomy, and relatedness (Deci & Ryan, 2000). The relative fulfillment of basic psychological needs may, then, provide the essential conditions under which an identity trajectory may develop, flourish, or wither. Inbound or peripheral paradigmatic trajectories could derive their motion from relative satisfaction of basic psychological needs as much as the desire for future participation in a community of practice. The satisfaction of basic psychological needs could potentially be a prerequisite condition affecting professors’ identity trajectories. Consequently, this study’s results suggest that community of practice theory may need to be modified to account for the role of self-determined needs in identity trajectory development.

Further Reflections

In this section, I reflect on larger issues and concerns the findings of this study raised for me personally. This dissertation focused on the human experience of faculty members teaching digitally-mediated courses. While research on the knowledge professors need to integrate technology-in-teaching effectively is essential to create well-designed courses, this study introduces a *developmental perspective* steeped in the experience of professors’ lives and relationships. It highlights the ontological nature of the technological transformations of our time. I raise the question, “What is the meaning of academic work in our digital age?” It has led me to consider the conditions under which professors feel alive and connected, rather than separated from their own sense of being and from generative relationships with others. It has led

me to ask: How do new technologies affect the meaning of being one's self, being with others, and being engaged in one's work?

I am not alone in asking these questions; recent New York Times bestselling books raise questions related to each of these three dimensions of being. William Powers (2010), in *Hamlet's BlackBerry*, expresses concern that the “digital crowd” (p. 52) separates people from being themselves and cultivating a rich inner life. He argues, “The more connected we are, the more we depend on the world outside ourselves to tell us how to think and live.... We don't turn inward as often or as easily as we used to” (p. 2). Sherry Turkle (2011), in *Alone Together*, expresses concern that communication technologies intended to connect us are instead making us feel more distant and isolated from one another. Nicolas Carr (2010), in *The Shallows*, argues that the Internet is affecting our capacity to sustain attention, arguing that when we multitask, we learn “to be skillful at a superficial level” (p. 141). Jaron Lanier, in his critique of Web 2.0 in *You Are Not A Gadget*, entreats his fellow computer scientists to recognize that “the most important thing to ask about any technology is how it changes people” (p. 36).

Discovering how technology changes academic work turns out to be a not-so-easy task. This is due, in part, to a dominant discourse that focuses on what technology does for professors. This discourse focuses on thoughtful pedagogical uses of technology, how to design courses that achieve learning outcomes, and effective strategies for preparing professors with the literacies necessary for academic work in the digital age. These are essential lines of inquiry and my study is a clarion call that a new line of inquiry is essential – one focused on how technology affects professors and the meaning of academic work.

Manifest and latent functions of academic teaching. To get at questions about how technology affects the meaning of academic work, I believe a useful analytical approach is to

contrast the evident and less obvious functions of academic work: What do professors do anyway? Our answer to this question greatly depends on how we understand the meaning of academic work in our society and for professors themselves. This study suggests that professors experience digitally-mediated academic work at more than one level simultaneously, including its technological, professional, and personal dimensions. If “the most important thing to ask about any technology is how it changes people” (Lanier, 2010, p. 36) we cannot afford to skim the surface of professors’ experiences.

Robert Merton’s concept of *functional analysis* is one way to plumb the depths of professors’ experiences. Functional analysis examines social practices to determine the effects that are “intended and recognized by participants in the system” (manifest) and “those which are neither intended nor recognized” (latent) (p. 51). Merton argued that an activity may have more than one function and some of its functions may be unintended - or at least not obvious - even to those who participate in the activity. For example, if you ask professors about teaching digitally-mediated courses, they might reply with the manifest function of their behavior. They may say digitally-mediated courses broaden access to their academic program or that they work to align instructional strategies and technologies with desired learning outcomes. On the other hand, if you ask professors to tell you about their experience teaching with technology they may respond with a story. They may describe how they do not feel like they are being the mentors they could be to students or how they miss seeing students’ faces.

The manifest and latent functions as analytic approaches have been useful in highlighting how other aspects of American higher education serve important purposes that are not readily evident, even to those participating in them (Birnbaum, 1989). An analysis of the latent functions of a behavior has both theoretical and practical advantages because it “directs attention to

theoretically fruitful fields of inquiry” (Merton, 1957, p. 65); “represents significant increments in sociological knowledge” (Merton, 1957, p. 68); and “precludes the substitution of naive moral judgments for sociological analysis” (Merton, 1957, p. 70).

Although the manifest functions of digitally-mediated academic teaching give it recognizable forms, I believe its latent functions give it meaning. I illustrate the manifest and latent functions of digitally-mediated teaching by briefly considering the manifest functions courses are presumed to play as well as a number of important latent functions courses actually play in professors’ academic lives.

My consideration of the latent functions of courses is not a purely theoretical exercise; it has practical consequences for those who find existing approaches to digitally-mediated teaching in need of reform, particularly those who aim to “hack the academy.” Those who make arguments for reform must consider how any reform affects not only courses’ manifest functions but also their latent functions as well. Social changes that ignore important latent functions, Merton argued, heighten “the risk of failure.” (Merton, 1957, p. 81)

The manifest functions of a course: Teaching-with-technology. The dictionary definition of a course is a “series of lectures or lessons in a particular subject, typically leading to a qualification” (Merriam-Webster, 2008). The manifest functions of good digitally-mediated teaching focus on teaching-with-technology. This perspective views teaching as a complex activity that requires thoughtful pedagogical uses of technology. Professors design a course that achieves learning outcomes. At the end of a semester, students are assessed, assigned a grade, and the course closes on the course management system. Effective course design requires the alignment of learning objectives, instructional strategies, and assessment.

From this perspective, good teaching involves professors identifying the learning objectives for a particular course, integrating learning technologies with instructional strategies, and assessing learning outcomes. Well-designed courses support student learning more effectively than ones that do not align these three elements. Consequently, universities invest vast amounts of money to support these activities by hiring instructional designers, facilitating faculty development workshops, and rewarding exemplary digitally-mediated teaching practices.

One effect of a focus on teaching-with-technology, however, is that it leads both professors and higher education researchers to use language that focuses on when faculty members adopt new technologies relative to other members of society. Professors may describe themselves as “early adopters”, “late adopters”, or even “laggards” in their use of new technologies (Rogers, 2003, p. 22). Those who make arguments for reform consider ways to both encourage the adoption of and overcome any resistance to new digitally-mediated approaches to teaching and learning. This focus on teaching-with-technology, then, involves encouraging reflection on thoughtful pedagogical uses of new technologies for teaching and learning. Consequently, researchers focus on what professors know about the effective uses for technology (Mishra & Koehler, 2006) and the diffusion of innovations within organizations (Frank, Zhao & Borman, 2004).

The latent functions of a course: Technology-and-the-self. Whereas the manifest functions focus on questions related to teaching-with-technology, the latent functions focus on questions related to technology-and-the-self. From this perspective, courses involve more than achieving learning outcomes. A course, more broadly defined, means “route, way, path, or trajectory” (Merriam-Webster, 2008). A course is a set aside space to get one’s bearings in the world. Aristotle, for example, took a peripatetic approach to teaching; he walked a course with

his students. This image of wandering, meandering, or walking about provides some insight into the latent functions of a course.

For both professors and students, courses affect the dynamic processes inherent in our relationship with ourselves, our relationships with others, and our relationship with our work. In this sense, professors do so much more than cover material, they help students discover deepened ways of understanding themselves, enriched ways of relating to others, and new ways to explore personally meaningful questions. Also, courses are not just for students. Professors too may stumble upon something new or unexpected about themselves, they may form mentoring relationships with students, or they may uncover new questions worthy of further exploration. The following three paragraphs briefly illustrate the latent functions of courses. To explore the latent functions I examine dynamic processes inherent in professors' and students' relationships with themselves, their relationships with each other, and their engagement in meaningful work.

Being engaged in one's work. Courses create space for being engaged in one's work.

Although courses seem ephemeral, they may take a life of their own, affecting the people involved far beyond the semester. Professors have a felt connection to the life of this work; it's entirely original. It creates something of lasting value. This is part of the tradition or handcrafted nature of learning in an apprenticeship. Annie Dillard (1990) tells the story of asking a close friend how he became a master painter. He replied, "I like the smell of paint" (p. 70). Being a professor is guided by a love for the nitty-gritty materials of academic work itself, in whatever form it takes. Professors sense something sacred in elegant equations, the smell of a laboratory, or gazing at the pages of an ancient manuscript. In other words, academic work is not purely instrumental in its purposes; the instrumental outcomes emerge from a love for the aesthetic dimensions of it. When professors tell of "sharing their passion" they are sharing their "love for

the smell of paint.” Those dimensions sustain them and inspire students to begin their own explorations in a discipline or field.

For students, encounters with the nitty-gritty materials of work are where they discover some purpose worthy of their lives. Higher education institutions do not just grant degrees; they inspire higher learning. Noam Chomsky (2012) tells of a colleague who teaches introductory physics at MIT. On the first day of his course one student inevitably asks, “What are you going to cover in this course?” He responds, “It does not matter what I cover, it matters what you discover!” This is a learning outcome that is not easily measured. In students’ encounters with the nitty-gritty materials of work, they may discover their love for equations, for sentences, for manuscripts, for medicine - something that connects them with their own sense of being human. This connection, developed in walking a course with a professor who loves her work, gives students access to an inner-teacher that can guide them for years.

Being one’s self. Courses create space to be one’s self. Courses may be spaces for expressing and developing our changing identities. For professors, courses may be a place to express an aspect of themselves that only comes out when speaking to a lecture hall full of two-hundred students. This aspect of a professor’s self may not be evident in departmental meetings, advising sessions, or conference presentations to their academic peers. Courses may be drudgery for some professors; for others, they may be a welcome break from writing research papers, a way to express their quirky sense of humor, or a hobby to explore other intellectual interests. Teaching a particular course may even serve as a status symbol that marks a change in a professor’s status within their department.

For students, courses may be a place to explore new identities and social roles. Life transitions, in particular, involve more than just acquiring new knowledge and skills, they often

involve deep structural shifts in ways of understanding one's self. Courses may lead students to name and elaborate on aspects of themselves that were previously unacknowledged or underdeveloped, thus forming a deeper sense of purpose in their education or vocation. Students may learn something about themselves simply by hearing themselves articulate their own thoughts and ideas to the professor or to other students.

Being with others. Courses also create space for being with others. For professors, a course may be a peculiar kind of social activity. It may be an opportunity to recruit promising young students for graduate programs or simply an enjoyable pastime. It may be a time to talk to students about the university's football season, to discuss current events and issues, or try to relive their own experience as a student. A course may be the primary location for recruiting students to help in a professor's research. A student comment may inadvertently spark a professor to think about a perennial issue in fresh ways. The findings of this study suggest some professors may view a course as the primary way they fulfill their commitment to identifying and mentoring promising students to continue work in their discipline or field.

For students, a course may be a social outlet for a working parent or a way to meet a future partner. Courses may also represent a completely new kind of social space where students practice relating to others in new ways. Life transitions involve changes in students' social identities. Conversations with others may call into question habitual ways of experiencing the world and conversations with others may also provide essential social support if students are grieving significant losses of an identity. Students learn from their whole experience in a course. They learn not only from the course content but also from how professors respond to a combative student or a student's confession of confusion. In the right context, students learn

from their peers in the “company of strangers” (Palmer, 2011, p. 89) – a social group of a much different kind than our everyday social connections of more like-minded peers.

There is no question that good teaching depends on learning how to teach-with-technology. Learning outcomes, course design, and thoughtful integration of technology, pedagogy, and content are essential. They are not the only essential elements, however. There are dynamic processes inherent in professors’ and students’ relationships with themselves, their relationships with each other, and the processes of engaging in meaningful work. Richard Rorty (1999) provides a vivid image that highlights the role of “loose canons,” not just learning outcomes, in higher learning:

[To administrators, faculty] look like loose canons, people whose habit of setting their own agendas needs to be curbed. But administrators sometimes forget that college students badly need to find themselves in a place in which people are not ordered to a purpose, in which loose canons are free to roll about. (p. 125)

Reflections on how other forms of academic work are changing. The findings of this study not only led me to reflect on digitally-mediated teaching, they also led me to reflect on how digitally-mediated technologies are changing the nature, meaning, and organization of other forms of academic work. New technologies are changing the nature, therefore the purposes and meaning of being a faculty member. The Internet is so essential to academic work that, even if professors wanted to dispense with it, they could not. Imagine a chart illustrating the average number of hours a professor spends each day interacting with a screen from the 1970s to today. Professors’ work on the screen is steadily increasingly, if not exponentially increasing.

One way to think about the changing nature of academic work is to identify new types of academic work and help faculty develop the necessary skills. Administrators support individual faculty members as they learn to be more organized, multitask, and manage the demands these forms of academic work require. Although effective time management is essential to academic

productivity, this perspective alone fails to recognize the significant shifts in the nature, meaning, and organization of academic work in our new digital age.

In contrast to the perspective outlined above, another way to think about the changing nature of academic work is to consider how new forms of academic work affect the meaning of academic work itself. From this perspective, faculty members and administrators must work together to create institutional supports for new forms of academic work, and to identify the best possible contributions faculty members may make to these institutional or departmental responsibilities. Whereas the first perspective emphasizes how individual faculty members organize their time, this perspective emphasizes how institutions and departments organize for new forms of academic work. For example, institutions and departments could think about organizing academic work at the departmental-level, not expecting every faculty member to do the same things as their departmental colleagues. A more differentiated approach to departmental responsibilities not only rewards different types of work in formal promotion and tenure structures, but also taps into what professors find most rewarding about their work.

Listening to our lives: Reconnecting with a sense of purpose when disconnecting is not an option. How do we help faculty learn new forms of digitally-mediated teaching? As I review the interviews that I conducted, I notice that as professors shared their experiences, they put into language an inner, complex, and emotional process of meaning making. Professors disclosed how they make meaning of their experiences teaching digitally-mediated courses.

The traditional way to help faculty learn new forms of digitally-mediated teaching has been to offer training so professors can develop the technical and pedagogical proficiencies required by new forms of digitally-mediated teaching. This study suggests an alternative, complementary approach may be worth considering; higher education could encourage

professors to share how new forms of digitally-mediated work are affecting the nature, meaning, and organization of academic work.

This study has led me to a focus on how technology affects professors and the meaning of academic work. Whether professors embrace or resist new technology may have little to do with what the new technology does for professors. Instead, their response may reflect whether the technology fulfills the important latent functions of academic work. Any resistance uncovers important information about the meaning of academic work for each professor; it is not something to be overcome.

What makes academic work useful to professors, to students, and to society? Such a question, at one level, invites debate on the measurable activities professors do in a typical work week. At another level, the question invites us to consider what we mean by the term useful. It is this question posed by an image in the eleventh chapter of Laozi & Mitchell's (1988) translation of the Tao Te Ching:

We join spokes together in a wheel,
but it is the center hole
that makes the wagon move.

We shape clay into a pot,
but it is the emptiness inside
that holds whatever we want.

We hammer wood for a house,
but it is the inner space
that makes it livable.

We work with being,
but non-being is what we use. (p. 11)

What makes academic work useful? The manifest functions give academic work its structure and shape; the latent functions give academic work its meaning and use. To a general observer, a building is a structure; to an architect, a building creates a space. The spaces we

create invite new forms of living, learning, and working together. Louis I. Kahn, one of the preeminent architects of the twentieth-century, designed rooms around imagined conversations of the people who would gather in them. As we consider the meaning of academic work in a digital era, it is essential to pay attention both to our structures and spaces and the conversations they inspire or ignore.

Stories are central to how humans make meaning of our encounters and experiences. If you ask professors to describe their ideas about digitally-mediated teaching, the question itself takes them to their intellect. If you ask them to share a story about their experience teaching digitally-mediated courses, it invites them towards more integrative ways of understanding their experience. Stories ask large questions; they bring into union rational thought and our inner, subjective sense of the world. In conversations where professors share ideas, they may debate contemporary theories about digitally-mediated teaching. In conversations where professors share their experiences, they may uncover the latent functions - and meaning - of their academic work. They may not find an answer, but they may just discover that they are not alone.

Limitations

This study's findings are limited by the fact that (a) the study was conducted at a single site; (b) the study only examined the experiences of tenure-track faculty, not part-time or adjunct faculty; and (c) the source of data for the study was professors' descriptions of their actions, relationships, and social contexts rather than direct observation of these interactions.

Further Research

Future researchers may wish to expand this line of research in three ways: (a) qualitative research designed to continue refining the concepts and language of the key findings of this study; (b) longitudinal research designed to explore developmentally effective experiences; and

(c) quantitative research designed to translate the theoretical framework developed in the present study into a quantitative instrument.

First, researchers may wish to expand this line of research through qualitative research designed to continue refining the concepts and language of the key findings of this study. Although the present study focused on academic work, professors clearly situated digitally-mediated teaching in the context of their academic careers. Therefore, future researchers could seek to understand dynamic relations among self, community, and contribution within the development of faculty members' academic careers. Researchers might use semi-structured interviews explicitly informed by the theoretical literature on "possible selves" (Clark & Rosier, 2008; Markus & Nurius, 1986; Rossiter, 2007).

Second, researchers may wish to expand this line of research through longitudinal research designed to explore developmentally effective experiences. Future researchers may wish to consider the experiences professors identify as having a positive impact on their learning and development. The major criterion for designating something as a developmentally effective experience would be that it affected how professors understood themselves, their relationships with students, or their understanding of the broader contribution of their digitally-mediated teaching practice (King, Baxter Magolda, Barber, Kendall Brown, & Lindsay, 2009). Researchers could examine professors' experiences longitudinally by interviewing professors their first year teaching digitally-mediated courses and again in years three or four. Faculty developers and instructional technologists could use this knowledge to help professors develop personally meaningful approaches to digitally-mediated teaching.

Third, researchers may wish to expand this line of research through quantitative research designed to translate the theoretical framework developed in the present study into a quantitative

instrument. Researchers may consider constructing a quantitative instrument to understand the relationships among the concepts within the theoretical framework developed by the current study. Investigators could include existing concepts utilized in theoretical and empirical literature, e.g., faculty satisfaction (Wasilik & Bolliger, 2009) or work-life balance (Heijstra, 2010), to understand the relationship of these concepts to the theoretical framework developed by the current study. Researchers could also examine the relationships of the concepts to each other, as well as the changing patterns of relationships for faculty members in different career stages, disciplines, or institution types.

APPENDICIES

APPENDIX A

Dissertation Completion Timeline

September 2010-March 2011

- Draft Chapters 1, 2, and 3
- Set up dissertation committee meeting

April 2011

- Defend Proposal Make Revisions
- Submit IRB documents

May 2011

- Make arrangements for Phase I interviews (after IRB approval)

June-August 2011

- Collect Data and Transcribe Interviews

September-December 2011

- Write Chapters 4 and 5

January 2012

- Set up date for oral exam

February 2012

- Oral Examination

March-April 2012

- Submit changes specified from oral defense to chair
- Chair signs and submits final draft form
- Fill out graduation, copyright, and Michigan State University forms

May 2012

- Degree conferred

APPENDIX B

Phase I Semi-Structured Interview Protocol

Background Information

Welcome the faculty member, thank him/her for meeting, and begin completion of consent form. Provide faculty member a written description of the study and provide a copy of a consent form; collect the one that faculty member signs. Review the consent form and ensure he/she consents to both the participation and digital recording.

Introduce the study verbally and thank them for agreeing to participate, e.g. My purpose in speaking with you today is to hear about your experiences in learning to teach [field of study] online. I hope to better understand what it means for you personally to learn in relation to your understanding of effective teaching online in [field of study]. I hope to gain an understanding of how faculty approach and gain from different types of experiences. I look forward to hearing your unique perspectives and the set of experiences that have guided your efforts to learn to teach online.

Interview Questions

First we'll discuss your beliefs about effective and your experiences teaching online, then we'll explore more deeply what supported your learning to teach online. Finally, we'll discuss distinctives of teaching your discipline online as well as two particular issues identified in the research literature relevant to teaching online.

Part 1: Beliefs About Effective Teaching

I'd like to start by asking about your beliefs of effective teaching.

Research Question	Interview Question
----------------------	-----------------------

- | | |
|---------|--|
| [Q1,Q3] | 1. What does it mean to be an effective teacher in [field of study]? <ul style="list-style-type: none">• What are some of its critical components?• How did you develop your understanding?• How has your understanding evolved over time? |
|---------|--|

- | | |
|------|--|
| [Q1] | 2. Describe your first experience teaching an online course. <ul style="list-style-type: none">• What circumstances led you to start teaching online?• What course(s) did you teach?• What did you expect when you started?• How did your early experiences compare with your expectations? |
|------|--|

APPENDIX B (cont'd)

- [Q1,Q2] 3. Tell me about your experiences teaching online.
- Why was it important to you?
 - How did it affect you?
 - [Draw out descriptions and meanings.]

Part 2: Learning To Teach Online

Let's focus specifically on your experiences as you've learned to teach [field of study] online as part of your academic work here at [the University]. Feel free to revisit and go more deeply on experiences and themes we've already discussed. We can talk about things you've mentioned and explore them more thoroughly.

- [Q2] 4. How do you think you go about learning to teach online?
- Do you think that is different than how you learn to teach face-to-face courses. If so, what differences do you see?

- [Q2] 5. What experiences have contributed to your learning to teach online.
- What would you say were two of the most significant ones that you have mentioned?

- [Q2,Q3] 6. Who/what are your support systems in learning to teach [field of study] online? Tell me about them.
- When you need support, where do you find it?
 - Who do you talk to most often about what is going on substantively in your online teaching?
 - Who do you trust for help when something important is on your mind?

- [Q2] 7. Are there particular colleagues who have helped you learn to teach online?

- [Q2,Q3] 8. When have you felt most supported in your efforts to learn to effectively teach [field of study] online?
- When have you felt little or no support?

APPENDIX B (cont'd)

Part 3: Distinctive Features Within Discipline or Field at University

Now I'd like to focus in particular about your understanding about how learning to teach your discipline online might be different from learning to teach online more generally.

- [Q3] 9. What do you think are the qualities of excellent online teaching, especially for a professor of [field of study]?
- [Q1,Q3] 10. Even within the same field, professors may have different approaches to teaching online. How might your approach be different from some of your colleagues?
- [Q1,Q3] 11. If you discovered that a colleague in your field was beginning to teach online for the first time, what advice would you give him/her?

Part 4: Integrating Technology and "Online Presence"

- [Q3,Q4] 12. There are times professors have to teach complex concepts, methods, etc. in their fields that can be quite challenging for students to grasp. How might you go about teaching something that is difficult for students to grasp in an online course?
- Is the approach you described any different than how you would teach that same concept, method, etc. in a face-to-face course? If so, how.
 - Can you think of any other examples? [Repeat until no further examples.]
- [Q4] 13. Describe how you facilitate your online courses to promote learning.
- [Q4] 14. Tell me how you think technology in an online course affects the way you experience teaching.
- [Q4] 15. Tell me how you think technology affects what students learn and experience in your online course(s).
- [Q4] 16. Are there any other issues that come to mind related to learning to teach online that we haven't discussed?

APPENDIX B (cont'd)

Part 5: Concluding Questions

17. Is there any thing else you would like to share about what we've discussed today?
18. Are there any documents that might be helpful in understanding some of what you shared today that you would be willing to let me review? e.g., curriculum vitae, tenure narrative, teaching statement, course feedback, online course materials, course syllabi, etc.

Post-Interview Checklist/Commentary: Recorder Turned OFF

- Thank professor for participating.
- Give him/her your business card and tell him/her to contact you with any questions or additional information they think of relevant to the conversation today.
- Tell professor you enjoyed meeting him/her and you will send him/her a one-page memo summarizing major themes of the interview for him/her to offer comments on.
- Tell the faculty member that there will be two rounds of interviews. Their answers will be analyzed and used as the basis for developing another interview guide. It is that guide which will lead to the second round of interviews. Ask professor if he/she would be open for a 60-minute follow-up interview in about a month.

[Professor Leaves]

Post-Interview Interviewer Commentary: Recorder Turned ON

Interview debriefing:

- What do you see as the major themes for this interview?
- What is the most interesting thing you learned from the interview?
- What ideas, themes, or unclear statements would you want to follow-up in the second round of interviews?
- What connections do you see (with other interviews or to the literature)?
- Offer a summary and feedback on the quality of the interview, distinguishing characteristics, faculty reactions/responses to the interview.

APPENDIX C
Email to Nominators

Dear [name],

My name is Chris Glass and I am a doctoral student in the Higher, Adult, and Lifelong Education program at Michigan State University. Currently, I am working on my doctoral dissertation entitled Situated dimensions of research university professors learning to teach advanced-level courses online in their fields of study. My dissertation studies how university professors who teach online advanced-level courses learn about this form of academic work within the context and goals of teaching in their fields of study.

I am writing to see if we might schedule an appointment where we could discuss professors who you might nominate for this study. As [title], I need your help in identifying professors at Michigan Sate University who might meet the criteria for participation in this study.

I am interested in identifying tenure track professors who teach at least one advanced-level online course. In addition, I am interested in identifying three subgroups of professors within this overall group. Participants in the first group will have received formal recognition for their online teaching evidenced by receiving an award for outstanding online teaching or facilitating a faculty learning community related to online teaching. Participants in the second group will evidence an active pursuit of learning related to online teaching through such things as participating in a faculty learning community or attending a faculty development workshop. Participants in the third group will teach an online course yet evidence minimal participation in activities related to learning about online teaching.

I will not contact these professors or use your name when contacting them without your approval.

Thank you so much for your time and consideration. If you have any questions about the study, please do not hesitate to contact me. I really appreciate your assistance.

Chris R. Glass
Doctoral Candidate
Higher, Adult, and Lifelong Education
Michigan State University

APPENDIX D
Email Inviting Potential Participants

Dear [name],

I am writing to invite you to participate in my doctoral dissertation study entitled, *Situated dimensions of research university professors learning to teach advanced-level courses online in their fields of study*. I am conducting this study as part of my program of study as a doctoral student in the Higher, Adult, and Lifelong Education program at Michigan State University. The aim of this study is to understand how university professors learn about teaching online within the context and goals of teaching in their fields of study. I have included a short description of the study below.

My invitation to you is based on nominations provided by the Director of Faculty and Instructional Development Programs, the Coordinator of Instructional Technology, and the Director of Virtual University Design and Technology. One of your nominators, in particular, [name] highly recommended you for the study.

Your participation would involve an interview (90-120 minutes) and providing documents related to your teaching online (course syllabi, teaching statement, etc.). There is also the possibility that I may ask you to participate in an optional second phase of the study involving a 60 minute follow-up interview.

Your privacy is very important to me. I will treat the interviews and any other documents you provide with the utmost confidentiality, and only I will have access to your identity. Your identity and your university will be confidential, and will not be released to any persons in your university or beyond it. Pseudonyms and other identity-masking techniques will be used in all presentations or writing about this study.

I hope that you will be able to participate in this study, and contribute to an improved understanding of how university professors who teach online advanced-level courses learn about this form of academic work within the context and goals of teaching in their fields of study. If you have any questions about the study, please do not hesitate to contact me. I really appreciate your assistance.

Sincerely,

Chris R. Glass
Doctoral Candidate
Higher, Adult, and Lifelong Education
Michigan State University

APPENDIX E

Study Description

Situated dimensions of research university professors learning to teach advanced-level courses online in their fields of study

The purpose of this study is to understand how university professors who teach online advanced-level courses learn about this form of academic work within the context and goals of teaching in their fields of study. I address the following question: From professors' points-of-view, what does it mean to learn to teach online within the context and goals of teaching in their fields of study?

I rely on interview methods and documentary analysis of 16 professors working at a single Carnegie Doctoral/Research University (Very High Research Activity). Through the analysis of these interviews, along with course syllabi and teaching statements, I hope to contribute to knowledge on how university professors learn in relation to their understanding of effective advanced-level teaching online in their fields of study.

APPENDIX F

Research Participant Information and Consent Form

You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Study Title: *Situated dimensions of research university professors learning to teach courses online in their fields of study*

Primary Investigator: Ann E. Austin, Ph.D., Department of Educational Administration, College of Education

Address and Contact Information: 417 Erickson Hall, East Lansing, MI 48824-1034, aaustin@msu.edu, 517-355-6757

1. PURPOSE OF RESEARCH:

As a faculty member who teaches an online course, you are being asked to participate in this research study of the situated dimensions of research university professors learning to teach online courses. Your participation will contribute to the knowledge surrounding how university professors who teach online courses learn about this form of academic work within the context and goals of teaching in their fields of study. This study entitled *Situated dimensions of research university professors learning to teach courses online in their fields of study* is conducted by Chris Glass under the supervision of Dr. Ann E. Austin. Please note that if you are under 18 years old, you are not able to take part in this study.

2. WHAT YOU WILL DO:

Your participation would involve an interview (60-90 minutes) and providing documents related to your teaching online (course syllabi, teaching statement, etc.). There is also the possibility that I may ask you to participate in an optional second phase of the study involving a 60 minute follow-up interview, thus making your total time commitment about 3 hours. The interviews will be conducted in an informal, conversational manner with open-ended questions that allow you to talk about your experience candidly. You may agree to be digitally recorded, or you may choose not to be digitally recorded during our conversations. Your identity will be held in strict confidence, and during data collection, researchers will arrange for private or semi-private areas for consent and the interviews.

3. RISKS AND BENEFITS:

While participating in this study, you will encounter minimal risks, including the potential inconvenience of scheduling the interview and/or the possibility that anxiety or unpleasant experiences will surface during the interview. The researcher will minimize these risks. The benefits of participating in the study include the opportunity to reflect upon and articulate your experience as well as contribute to a broader understanding of how professors who teach online

APPENDIX F (cont'd)

courses learn about this form of academic work within the context and goals of teaching in their fields of study.

4. PRIVACY AND CONFIDENTIALITY:

Your confidentiality will be protected to the maximum extent allowable by law. Any direct identification information, including your name, will be removed from data when responses are analyzed. All data will be secured in locked file cabinets and password protected server space at Michigan State University. The data will be accessible only to the researchers associated with this study and the Institutional Review Board. During analysis, numeric codes will be assigned to your information so that your name is not associated with the data files.

During dissemination, findings will be reported by theme (aggregating the data) or by pseudonym (assigning a fake name). The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain confidential. Special care will be taken to ensure contextual details do not give away your identity. Although every attempt will be made to keep your identification private, some distinguishing responses that you share and other comments may reflect your identity.

All data will be stored for at least 3 years after the project closes. Three years after the conclusion of the study, the data (digital audio files, transcripts, my notes, documents related to your teaching online) will be destroyed.

5. YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW:

Your participation is completely voluntary. You may choose not to participate at all, or to answer some questions and not others. You may also change your mind at any time and withdraw as a participant from this study with no negative consequences. Choosing not to participate or withdrawing from this study will not involve any penalty or loss of benefits to which you are otherwise entitled. Your responses or decision whether or not to participate in this study will have no penalty of any kind and will not affect your status as a faculty member.

6. COSTS AND COMPENSATION FOR BEING IN THE STUDY:

You will receive no compensation for participating in this study.

7. CONTACT INFORMATION FOR QUESTIONS AND CONCERNS:

If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury (i.e. physical, psychological, social, financial, or otherwise), please contact Dr. Ann E. Austin at 419 Erickson Hall, Michigan State University, MI 48824, aaustin@msu.edu, or 517-355-6757.

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research

APPENDIX F (cont'd)

Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 207 Olds Hall, MSU, East Lansing, MI 48824.

8. DOCUMENTATION OF INFORMED CONSENT.

By signing below, you are indicating your voluntary participation in this study and acknowledge that you may: 1) choose not to participate in the study; 2) refuse to answer certain questions; and 3) discontinue your participation at any time without any penalty or loss of benefits to which you are otherwise entitled.

Your signature below indicates you voluntarily agree to participate in this study.

Signature _____ Date _____

Name (Printed) _____

In addition, your signature below means that you voluntarily agree to allow your responses to be digitally recorded.

Signature _____ Date _____

APPENDIX G

Summary Review Memo

Transcript Identification Information

Case Number: Interview

Date/Time: Location of

Interview: Department:

Descriptions and Reflections Related To Research Questions

Note: Use the participants language as much as possible as you reflect on these prompts.

1. What are my reflections on the nature of the experiences the professor described in learning to teach online? What are my reflections on what they did (or did not) describe?
2. What are my reflections on the dynamics and qualities of experiences that the professor described as supporting his/her learning. Note qualities related to their activities; social interactions (e.g., reciprocity, frequency/diversity of interactions, relational history, formal/informal, etc.); and cultural contexts. What was the affect of these experiences on the professor in his/her own words?
3. What are my reflections on how the professor represented the distinctive features of learning to teach online advanced-level courses in their field, e.g., did they use any particular language or metaphors, describe any distinctive practices or challenges, did they draw attention to particular distinctives of themselves or their field, etc.?
4. What are my reflections on how the professor represented the meaning of effective pedagogical practice and online presence?

Overall Reflections

Based on today's reflections, is there anything else you would add to your post-interview reflections yesterday, e.g., major themes, most interesting thing, unclear statements, items to follow-up on, connections with literature and other interviews, etc.?

APPENDIX H
Descriptions of Participants

Pseudonym College	Appointment	Course Technologies	Involvement in Professional Development Activities	Years of Digitally- Mediated Teaching Experience
GROUP 1: Professors Who Have Received Formal Recognition By The University For Exemplary Digitally-Mediated Teaching				
Terry Eaton <i>Social Sciences</i>	Full Professor	Primarily CMS with some multimedia	High involvement in university-level committees; national-level committees in field of study.	7+ Years
Jeremy Hamilton <i>Agriculture & Natural Resources</i>	Full Professor	Primarily CMS with some multimedia	High involvement in university-sponsored seminars and workshops	7+ years
William Meredith <i>Applied Social & Behavioral Sciences</i>	Full Professor	Primarily CMS with some multimedia	High involvement in national-level committees in field of study	7+ years
Michael Duvall <i>Applied Social & Behavioral Sciences</i>	Associate Professor	Primarily web 2.0 and open source technologies; limited use of CMS	Some involvement in university-level committees; high involvement in disciplinary-level conversations about digitally-mediated teaching	7+ Years
Stuart Widrick <i>Health Professions</i>	Associate Professor	Primarily web 2.0, open source, and mobile technologies; limited use of CMS	High involvement in disciplinary-level committees	4-7 Years

APPENDIX H (cont'd)

Pseudonym <i>College</i>	Appointment	Course Technologies	Involvement in Professional Development Activities	Years of Digitally- Mediated Teaching Experience
GROUP 2: Professors Who Regularly Participate in Professional Development Activities Related To Digitally-Mediated Teaching				
Gerald McQuade <i>Health Professions</i>	Full Professor	Primarily CMS with some multimedia	Limited involvement in university sponsored-workshops	4-7 Years
Shirley Even <i>Applied Social & Behavioral Sciences</i>	Full Professor	Primarily CMS with some multimedia	Occasional involvement in university-sponsored seminars or workshops	4-7 Years
Patrick Plunkett <i>Social Sciences</i>	Full Professor	Primarily CMS with some web 2.0 multimedia technologies	Occasional involvement in university-sponsored seminars or workshops	4-7 Years
Drew Cleveland <i>Health Professions</i>	Full Professor	Primarily CMS with some multimedia	Occasional involvement in university-sponsored seminars or workshops	4-7 Years
Ellen Lloyd <i>Health Professions</i>	Associate Professor	Primarily CMS with some multimedia	Some involvement with university-level seminars and workshops	4-7 Years
Derek Mederos <i>Natural Sciences</i>	Assistant Professor – Fixed Term	Mix of web 2.0, open source, and CMS	Some involvement in cross- disciplinary, university-level activities	4-7 Years
Jason Reynolds <i>Arts & Humanities</i>	Assistant Professor – Fixed Term	Primarily CMS with some web 2.0 multimedia technologies	Occasional involvement in university-sponsored seminars or workshops	4-7 Years

APPENDIX H (cont'd)

Pseudonym <i>College</i>	Appointment	Course Technologies	Involvement in Professional Development Activities	Years of Digitally- Mediated Teaching Experience
GROUP 3: Professors Who Do Not Regularly Participate in Professional Development Activities Related To Digitally-Mediated Teaching				
Katheryn Roth <i>Applied Social & Behavioral Sciences</i>	Full Professor	Exclusively CMS; no web 2.0, open source, or multimedia	No involvement university-sponsored seminars or workshops	<3 Years
Nita Venturini <i>Applied Social & Behavioral Sciences</i>	Assistant Professor	Primarily CMS with some multimedia	Limited involvement in university-sponsored seminars or workshops	<3 Years
Linda Scaff <i>Agriculture & Natural Resources</i>	Assistant Professor	Mix of CMS with web 2.0 multimedia technologies	Occasional involvement in university-sponsored seminars or workshops	<3 Years
Julianne Inniss <i>Applied Social & Behavioral Sciences</i>	Assistant Professor	Primarily web 2.0, open source technology; limited use of CMS	Occasional involvement with departmental-level discussions; no involvement in university-sponsored seminars or workshops	<3 Years

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