THE EXPERIENCE OF TEACHING ONLINE:
ITS IMPACT ON FACULTY PROFESSIONAL DEVELOPMENT AND INNOVATION

A Dissertation in
Adult Education
by
Lorna R. Kearns

© 2015 Lorna R. Kearns

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

May 2015
The dissertation of Lorna R. Kearns was reviewed and approved* by the following:

Melody M. Thompson
Associate Professor of Education
Dissertation Advisor
Chair of Committee

Gary W. Kuhne
Associate Professor of Education

Lawrence C. Ragan
Affiliate Faculty in the College of Agriculture
Co-Director, The Center for Online Innovation in Learning
Co-Director, The Institute for Engaged Leadership in Online Learning

Priya Sharma
Associate Professor of Education

David L. Passmore
Distinguished Professor of Education
Director of Graduate Studies for Learning and Performance Systems

*Signatures are on file in the Graduate School.
Abstract

As traditional colleges and universities increasingly incorporate online learning programs into their curriculum, it is important to understand the benefits that may accrue to the faculty who teach in those programs, particularly those that influence instructors’ continuing participation in face-to-face teaching. This study investigated how the experience of teaching online influenced instructors’ assumptions about effective teaching and their face-to-face teaching practices. The purpose was to provide a greater understanding of how this experience may contribute to faculty conceptions of teaching, classroom practices, and professional growth. The study used a survey and interviews to collect qualitative data from instructors who taught both online and face-to-face in a traditional face-to-face institution. Data were analyzed using a hermeneutical phenomenology approach.

Six overarching themes emerged: 1) Reflecting on Practice, 2) Creating Structure, 3) Promoting Active Learning, 4) Encouraging Peer Interaction, 5) Establishing a Connection, and 6) Conducting the Class. Reflecting on Practice occurs when instructors question themselves about their teaching goals and objectives. Creating Structure refers to course planning and designing. Promoting Active Learning reflects instructors’ ongoing consideration of how to promote deep student engagement with course content. Encouraging Peer Interaction focuses on creating opportunities for students to interact with one another as a means of social learning. Establishing a Connection describes instructors’ attempts to connect personally with students. Conducting the Class refers to the ongoing consideration of maximizing class time for student learning.

Three meta-themes were introduced to explain additional influences on the change processes described by the research participants. These were 1) affordances in technology and media, 2) permeability of the boundary between in-class and out-of-class learning activities, and 3) a shift in focus from teaching to learning.
A model showing thematic relationships is proposed that draws on a framework for teacher thinking developed by McAlpine, Weston, Berthiaume, and Fairbank-Roch (2006) and Moore’s (1989) levels of interaction. The process by which instructors make changes to their face-to-face teaching practice is described with reference to Kolb’s (1989) experiential learning cycle. It incorporates elements from Mezirow’s (1991) levels of reflection, Kreber and Cranton’s (2000) domains of teaching, and Salomon and Perkins’s (1989) learning transfer theory.
## Table of Contents

List of Figures .......................................................................................................................... vii

List of Tables ........................................................................................................................... viii

Acknowledgements .................................................................................................................. ix

Chapter 1 Introduction ............................................................................................................. 1
  Coming to the Question ................................................................................................... 1
  Statement of the Problem ................................................................................................. 4
  Purpose and Research Questions ..................................................................................... 8
  Significance of the Study ................................................................................................. 8
  Theoretical Framework .................................................................................................... 9
  Overview of Methodology ............................................................................................... 11
  Definition of Terms .......................................................................................................... 12
  Assumptions of the Study ................................................................................................ 13
  Chapter Summary ............................................................................................................ 14

Chapter 2 Review of the Literature .......................................................................................... 15
  The Experience of Teaching ............................................................................................ 15
    Teaching Conceptions and Approaches ................................................................... 16
    Content- and Learning-Oriented Teaching ............................................................... 18
    Instructor Knowledge, Cognitions, and Actions ..................................................... 20
  Faculty Development ....................................................................................................... 24
  Learning Theories That Emphasize Autonomy and Agency ........................................... 30
    Experiential Learning ............................................................................................... 31
    Informal Learning .................................................................................................... 33
    Reflective Learning .................................................................................................. 34
    Learning Transfer ..................................................................................................... 36
    Self-Regulated Learning .......................................................................................... 38
  Teaching Online ............................................................................................................... 39
  Impact of Teaching Online on Teaching Beliefs and Face-to-Face Teaching
    Practices ................................................................................................................... 43
  Chapter Summary ............................................................................................................ 46

Chapter 3 Methodology ........................................................................................................... 48
  Phenomenology ................................................................................................................ 48
  Methodological Rigor in Qualitative Research .............................................................. 52
  Population ........................................................................................................................ 56
  Data Collection ................................................................................................................ 57
    Phase One Data Collection ....................................................................................... 57
    Phase Two Data Collection ...................................................................................... 59
  Data Analysis ................................................................................................................... 60
  Chapter Summary ............................................................................................................ 63

Chapter 4 Findings ................................................................................................................... 64
Survey Results .................................................................................................................. 65
  Frequency Distributions .......................................................................................... 65
  Phase One Themes .................................................................................................. 68
Interview Summaries .................................................................................................. 73
  Allen ......................................................................................................................... 74
  Colin ......................................................................................................................... 75
  Emily ........................................................................................................................ 76
  Frank ........................................................................................................................ 76
  George ...................................................................................................................... 77
  John .......................................................................................................................... 78
  Miranda .................................................................................................................... 78
  Peter .......................................................................................................................... 79
Thematic Analysis ........................................................................................................ 80
  The Learning Episode as a Unit of Analysis ............................................................ 80
  Themes from the Learning Episodes ........................................................................ 83
Chapter Summary ..................................................................................................... 101

Chapter 5 Discussion ................................................................................................. 103
  Theoretical Connections .......................................................................................... 103
    The Learning Episode as Experiential Learning .................................................. 103
    Thematic Relationships and Connections to Theory ............................................ 115
  A Proposed Thematic Model ..................................................................................... 120
  Meta-Themes .......................................................................................................... 122
    Affordances in Technology and Media ................................................................. 123
      The Permeable Boundary between In-Class and Out-of-Class Learning
      Activities ............................................................................................................ 125
    A Shift in Focus from Teaching to Learning ......................................................... 128
    Interactions among Themes and Meta-Themes .................................................... 130
  Chapter Summary .................................................................................................. 132

Chapter 6 Conclusion ................................................................................................. 135
  Implications for Practice ......................................................................................... 135
  Contributions to the Literature .............................................................................. 138
  Limitations ............................................................................................................... 140
  Recommendations for Further Research ............................................................... 142
  Chapter Summary .................................................................................................. 145
  Closing Remarks .................................................................................................... 146

References .................................................................................................................. 147

Appendix A: Recruitment Email ................................................................................. 170

Appendix B: Survey .................................................................................................... 172

Appendix C: Interview Protocol .................................................................................. 176
List of Figures

Figure 1:  Guskey’s (1986) model of the process of teacher change .........................26
Figure 2:  Clarke and Hollingsworth’s (2002) Interconnected Model of Professional Growth ................................................................. 27
Figure 3:  Kolb’s (1984) Lewinian model of experiential learning (p. 21) .................... 31
Figure 4:  Adapted from Kolb’s later model of the experiential learning cycle with abbreviated component identifiers (Kolb & Kolb, 2009, p. 44) ....................... 32
Figure 5:  Adapted from Korthagen’s (2005) ALACT model .............................. 33
Figure 6:  Years of face-to-face and online teaching experience ............................. 66
Figure 7:  Disciplines represented in survey ........................................................ 67
Figure 8:  Experiential learning cycle ................................................................. 104
Figure 9:  The experiential learning cycle as it applies to the phenomenon of pedagogical change that occurs as a result of teaching online ...................... 115
Figure 10:  Categories of pedagogical change that occur as a result of teaching online .......... 121
Figure 11:  Categories of pedagogical change incorporating levels of interaction from Moore (1989) and zones from McAlpine et al. (2006) ............................. 122
List of Tables

Table 1: Criteria to ensure methodological rigor in quantitative and qualitative studies...53
Table 2: Categories of change reported on survey .............................................................68
Table 3: Demographic data collected from interviewees ...................................................74
Table 4: Example of learning episode ................................................................................82
Table 5: Learning episodes according to interviewee and theme category .......................84
Table 6: Phases of the experiential learning cycle in Allen’s episode of Promoting Active Learning.................................................................105
Table 7: Phases of the experiential learning cycle in Colin’s episode of Establishing a Connection ........................................................................................................106
Table 8: Alignment between Mezirow’s (1991) levels of reflection and Kreber and Cranton’s (2000) domains of teaching knowledge ...........................................107
Table 9: Phases of the experiential learning cycle in Miranda’s episode of Reflecting on Practice ........................................................................................................109
Table 10: Phases of the experiential learning cycle in Emily’s episode of Promoting Active Learning.................................................................111
Table 11: Phases of the experiential learning cycle in Frank’s episode of Conducting the Class .................................................................112
Table 12: Phases of the experiential learning cycle in Peter’s episode of Promoting Active Learning.................................................................113
Table 13: Correspondence between theme categories and Moore’s (1989) levels of interaction .................................................................................................116
Table 14: Correspondence between theme categories and McAlpine et al. (2006) zones ...117
Acknowledgements

It was a long journey from my entrance into the Adult Education doctoral program to the time of my dissertation defense. There are many people I wish to thank.

I will begin with my dissertation advisor, Dr. Melody Thompson. When I first entered the doctoral program, you invited me to collaborate with you on more than one presentation and publication. These were valuable early experiences for me as I took my first steps in a new career. In the years since, you have spent many hours talking with me about my ideas. I could not have asked for a better intellectual mentor, someone who always made me feel my ideas were important yet challenged me to extend them just a bit further.

To the other members of my dissertation committee, Dr. Gary Kuhne, Dr. Larry Ragan, and Dr. Priya Sharma, thank you so much for your insights and feedback along the way and your support in helping me achieve my goals. Larry, I am especially grateful for your assistance in my endeavors to gain access to an appropriate research participant population. On that same subject, I would also like to thank Dr. David Sylvia, Director of Graduate Programs at the World Campus, for providing me with access to the population of Penn State instructors who taught graduate-level courses for the World Campus.

I am extremely grateful to the eight instructors who graciously allowed me to interview them. You each invested several hours in interviewing, emailing, and follow-up reading. I learned much about teaching from every one of you and enjoyed our conversations immensely.

To the classmates who shared parts of the journey with me – Edith, Joann, Josy, Rucha, Shawn, Tom, and Will – thank you for the stimulating discussions, both in and out of class, and the laughs we shared at Whiskers and Otto’s.

Thank you to my three wonderful colleagues – Dr. Susan Alman, Dr. Barbara Frey, and Dr. Chris Tomer – for reviewing an early draft of my survey instrument. Our work together has been and continues to be a source of pride and pleasure.
I would also like to express my appreciation to my colleagues at the Center of Instructional Development and Distance Education at the University of Pittsburgh: Mike Arenth, Erik Arroyo, Anu Ashwat, Laurie Cochenour, Dean Croll, Diana Dill, Barbara Frey, Cynthia Golden, Jon Gunnell, Joe Horne, and John Shaw. Each and every one of you make the very interesting work we do enjoyable as well.

I must give a special thanks to my colleague and friend, Barbara Frey. We have presented together, published together, travelled together, and laughed together. In my early days at CIDDE, your encouragement and mentoring helped me gain my footing. Since that time, I have been lucky to have you as an advisor, supporter, and friend. I am very grateful.

My children, Maura and Cal Kearns, were in high school and middle school when I took my first doctoral courses. Maura and Cal, you are young adults now on your own life paths. I admire you both so much and I am so very grateful to be part of your lives.

Finally, I would like to thank my husband, Dr. Kevin Kearns. You have been my most stalwart supporter. I truly could not have done this without you. I cherish the many conversations we have had and will have about teaching, learning, and life. You are the best teacher I know.
Chapter 1

Introduction

This chapter describes the research problem, states the research purpose and questions, and explains the significance of the study. It also provides an overview of my theoretical framework and methodology and defines the terminology used in the study. It begins with a description of my professional involvement with the topic.

Coming to the Question

I began teaching graduate-level courses in systems analysis as an adjunct instructor in 1994. A year later, one of our program’s administrators asked me if I would be interested in teaching my course as part of a distance education project our department was going to launch. I immediately pictured myself standing in an empty room speaking to a video camera. I was not enthusiastic but I did not want to decline. It was important to me at the time to develop an identity as a legitimate, contributing member of the faculty in my department and I was pleased to be asked to participate in a project that was viewed positively for its innovativeness.

I did indeed teach in front of a camera but I was not standing alone. In the first semester of the project, I was videotaped teaching about 20 face-to-face students. At the end of the semester, a boxed set of VHS tapes was sent to each of the students enrolled in the distance course that I would teach the following semester. This was before my institution had implemented a learning management system so I communicated with my distance students via email and a Web site that was managed for me by a graduate assistant.

The semester project of this course was a paper analyzing a system problem situated in an organizational context to which students had some access. Students who did not have access to
such a context were permitted to team up with another student who did. That semester, with several teams of students, I worried about how effectively they would be able to communicate and exchange information. I was so new at teaching online that I did not have much advice to offer on how they would accomplish this. Each of the teams was far more creative and resourceful than I imagined they would be. Fortunately, all the students lived in the metropolitan New York City area. While that helped, they were still very widely distributed. Some teams, however, identified halfway points between their homes or work places and met at coffee shops or libraries. Others talked on the phone and exchanged documents via email. No one complained about the burden of having to forge a path through the wilderness of online learning. These mid-career, adult learners were all happy to have the opportunity to begin working on a degree that had not previously been available to them.

During the years that followed, I continued working with mid-career, distance students as an instructor, advisor, and program director. I became an online, mid-career student myself in 2004 and completed many of my adult education courses in an online format. In 2008, I began working as an instructional designer and faculty developer. I talked with faculty every day about course design, teaching strategies, learning activities, and assessment methods. I worked with both face-to-face and online instructors. Because my institution had only recently launched its first university-wide online graduate program initiative, most of the online instructors with whom I worked were new to online teaching and, because my institution is a traditional four-year, research-oriented university, most also continued to teach face-to-face classes. Today, I direct my university’s online learning initiative which means that I now have strategic and administrative responsibilities. Although I spend less time working one-on-one with faculty, I am happy that my work still presents many opportunities for me to talk with instructors about teaching and learning.

I often hear statements from faculty such as “I don’t see how I could teach my course online” and “There are just some courses that should not be taught online.” Recently, an
instructor who had been tasked by his department to develop an online course asked me why someone who enjoys the exhilaration of teaching in the classroom would want to teach online. These are legitimate concerns, ones which I sometimes struggle to address and which the literature suggests are common at other universities. On the other hand, I also encounter situations in which instructors tell me that teaching online led them to discover teaching strategies they have transferred to their face-to-face classrooms. In my view, these two phenomena, the challenges of moving a face-to-face course online and the impact that teaching online may have on face-to-face teaching, are distinct yet related. I believe that a fuller understanding of the latter may contribute to the development of a foundation for addressing the former. I see both phenomena as cases of learning transfer. In one case, instructors who have classroom-based teaching experience are required to apply that experience to the design and delivery of online courses. They struggle with how to adapt face-to-face learning activities and assessment practices to an online environment (Kearns, 2012). In the other direction, as instructors go through the process of developing and teaching an online course, they sometimes develop insights about how their students learn and discover new ways for teaching their subject matter in a face-to-face setting.

Given my prior involvement in moving my own face-to-face course online, my enthusiasm for online learning as a means of increasing access and choice to mid-career graduate students, my own experience as an online, mid-career student, and my current professional responsibility for overseeing online teaching and learning efforts at a large research university, I have undertaken this study to explore whether and in what ways the experience of online teaching may contribute to the understanding and practice of face-to-face teaching.
Statement of the Problem

The Online Learning Consortium publishes an often-cited annual report about online learning in higher education. The most recent (Allen & Seaman, 2014) surveyed 4,726 institutions. On the basis of a 60% response rate, the authors reported that enrollments in online courses have risen over the last decade from 10% to 34% of total post-secondary course enrollments. During that same period, the number of institutional administrators who asserted that online learning was a critical component of their institution’s strategic mission has also increased – from 49% to 66%. Somewhat misaligned with the rate of these increases was the rate of faculty acceptance of online learning. From 2002 to 2012, the most recent year in which faculty acceptance was assessed, this percentage has increased only slightly from 28% to 30% (Allen & Seaman, 2013).

Time demands and increased workload have been cited as the two most common disincentives to teaching online (Maguire, 2005; Shattuck, 2012). Other inhibitors included faculty concerns about the quality of online courses and the absence of student interaction. On the topic of incentives and rewards, Wolcott and Shattuck (2007) found that faculty who teach online did so because of intrinsic rewards such as engaging with innovative teaching strategies rather than extrinsic motivators such as financial compensation. Thompson (2003) identified benefits reported by faculty that included increased student access to educational opportunities, opportunities for quality interactions with students, flexibility and convenience, new opportunities for research, and positive student outcomes. It seems that, for some instructors, the benefits may indeed balance out the costs while, for others, the barriers remain high.

Pre-dating the advent of online learning was the launch of faculty development initiatives in higher education. According to Gaff and Simpson (1994), several factors converged in the late 1960s and early 1970s that resulted in an increased focus on faculty development in higher
education and the establishment of systematic faculty development programs. These included emerging research on the complex nature of teaching and learning and the growing number of non-traditional students in higher education, necessitating the development of new and innovative teaching methods. While the student body continues to become ever more diverse (Kuh, Kinzie, Buckley, Bridges. & Hayek 2006), the complexities of teaching and learning have yet to be fully understood.

More recently, teaching has been conceived as a scholarly activity (Boyer, 1990; Shulman, 2000), one that requires faculty to keep abreast of research on teaching and learning, conduct experiments in their own classrooms based on such research, communicate results to the field, and regard teaching from the student’s point of view (Trigwell, Martin, Benjamin, & Prosser, 2000). Kreber and Kanuka (2006) believe that the study of online learning holds potential to advance the scholarship of teaching and learning yet there have been few studies to date exploring how this might occur.

Kember (1997) reviewed several studies on faculty conceptions of teaching. An important reason to develop a better understanding of conceptions of teaching is to understand how they influence teaching practices and, ultimately, student learning outcomes. While some researchers (e.g., Kember & Kwan, 2000) have argued that instructors’ conceptions of teaching drive teaching practices, others (e.g., Devlin, 2006; Eley, 2006) believe that, while conceptions of teaching have an impact on teaching practices, a causal influence between the former and the latter cannot be confirmed. Devlin (2006) pointed out that, as either behavior or beliefs change, the other will most likely follow. Given this apparently close, yet only partially understood, relationship between teaching practices and teaching conceptions, it seems reasonable to question whether instructors’ engagement in a novel practice like teaching online has an impact on their assumptions about what constitutes effective teaching, on specific teaching practices, or on both. Although some studies have been conducted on how teaching online might influence face-to-face
teaching (e.g., Lowes, 2008; Pennington, 2005; Roblyer, Porter, Bielefeldt, & Donaldson, 2009; Scagnoli, Buki, & Johnson, 2009), the knowledge base is not robust.

An assumption often made in the literature on conceptions of teaching is that instructors’ beliefs about teaching are either learning-focused or content-focused (e.g., Kember & Kwan, 2000), the former being associated with a desire to promote active, engaged learning and the latter being associated with a goal of transmitting information. Devlin (2006) has suggested that, given the general desirability among many university instructors for high quality student learning outcomes, the two conceptions may not be mutually exclusive.

Notwithstanding the controversies and complexities inherent in the issue of content- vs. learning-centered teaching, calls have been made in the field of higher education over the last 20 years to move instructors from a content to a learning orientation (e.g., Barr & Tagg, 1995). Predictably, several studies have examined how conceptions of teaching change in this direction after instructors participate in faculty development initiatives (Gibbs & Coffey, 2004; Ho, Watkins, & Kelly, 2001; Postareff, Lindblom-Ylänne, & Nevgi, 2008). Others have shown that university instructors’ conceptions of teaching sometimes change in this direction even without the benefit of a formal faculty development intervention (e.g., Entwistle & Walker, 2000; McKenzie, 2003). While some researchers (e.g., Jaffee, 2003) have wondered whether the experience of teaching online can trigger such change in an instructor, few have studied how this might occur. Such a study might provide information to address this gap.

A relevant framework for studying this phenomenon is that of pedagogical content knowledge (Shulman, 1986). Pedagogical content knowledge is the knowledge instructors possess about teaching a particular subject. It entails knowing how to clarify difficult concepts, diagnose student misconceptions, and design effective learning activities for a specific subject matter. Recently, an extension has been proposed that focuses on how instructors use technology to teach a particular subject (Mishra & Koehler, 2006). Although the so-called technological
pedagogical content knowledge framework has relevance to online learning and teaching, much of the research it has generated has focused perhaps too narrowly on the technology component. Despite the recognition that pedagogical content knowledge among college and university faculty is an important area for study (e.g., Fernandez-Balboa & Stiehl, 1995), the majority of the research on it has focused on K-12 instructors. Even within that body of literature, it has been suggested that more research is needed on how different professional experiences, including both formal and informal learning, influence its development (Abell, 2008).

To summarize, online learning has become a more common and established educational delivery format at institutions of higher learning. Institutional administrators increasingly view it as a strategic priority for their institution. However, the rate of acceptance among higher education faculty has not kept pace with growth, demand, or increase in strategic significance. In parallel with these trends, the improvement of teaching has come into sharper focus at many institutions, in part, as a response to an expanding knowledge base on what constitutes effective learning for students. Many institutions now have faculty development centers to support instructors in designing instruction, teaching in classroom and online formats, and engaging in the scholarship of teaching and learning. Moreover, this focus on the improvement of teaching has engendered multiple streams of research on faculty development and learning, including instructors’ beliefs about teaching, their teaching practices, and the development of pedagogical content knowledge. The relationship among these phenomena, however, is only partially understood. A greater understanding of how the experience of teaching online can contribute to instructors’ conceptions of teaching, classroom practices, and professional growth would benefit the research base in faculty learning and development across different delivery formats and, as Thompson (2007) has said, “keep teachers, as well as students, at the centre of a process that should always be aimed at fostering the personal growth of all participants” (p. 166).
Purpose and Research Questions

The purpose of this phenomenological research study is to understand how the experience of teaching online influences instructors’ assumptions about effective teaching and their face-to-face teaching practices. This study seeks to answer the following research questions:

1. How do instructors who report having changed their assumptions about effective teaching as a result of teaching online experience this change phenomenon?
   a. How do they describe this change?
   b. What meaning does it have for them in their role as teachers?

2. Does the experience of teaching online influence these instructors’ practices in their face-to-face teaching?
   a. What changes in practice do such instructors plan and/or implement in their face-to-face classrooms?
   b. What reasons do they give for their decision to change their face-to-face practices?
   c. What factors contributed to their decision?

3. What types of learning are reflected in the phenomenon of pedagogical change reported by instructors?

Significance of the Study

This study has the potential to make both theoretical and practical contributions. As online learning in higher education expands, traditional faculty will likely be asked to teach online more often. Faculty who perceive online teaching as providing benefits to their overall teaching may be more interested in participating. The voices and experiences of other faculty may
be especially persuasive (Thompson, 2003). In addition, this study has potential to contribute to
the growing body of research on barriers and motivators for online teaching.

A fuller understanding of the relationship between online and face-to-face teaching may
assist instructional designers and faculty developers in communicating more effectively and
productively with faculty clients about instructional issues in both domains. Additionally,
expanding the knowledge base on the types of teaching strategies that work in both formats
should provide instructors and instructional designers with a more robust set of strategies as well
as an appreciation for how they can be used most appropriately in each context. In fact, an
appreciation for the kinds of strategies that transfer well across contexts may be helpful in
addressing instructional challenges that arise in new and emerging teaching domains. These can
include technology-mediated domains like massive open online courses (Kop & Carroll, 2012) or
face-to-face settings like problem-based learning courses (Major & Palmer, 2006).

The opportunity to explore how online and face-to-face teaching influence one another
may contribute to a better understanding of how faculty learn about teaching and learning in
general as well as enable researchers to identify particular experiences that can help improve
teaching. Advances of this sort would contribute to the refinement of a theory of faculty
professional development and innovation.

**Theoretical Framework**

The participants in this study were graduate-level instructors in higher education who
taught both face-to-face and online. The focus of the study was the impact the experience of
teaching online had on these instructors’ assumptions about what constitutes effective teaching
and the ways in which their online teaching experience influenced their face-to-face teaching
practice. Theories that are relevant to such a study are those which emphasize what instructors
believe about teaching, how they learn about teaching, how they change and improve their
teaching over time, and the formal and informal learning processes that influence both face-to-
face and online teaching.

Clarke and Hollingsworth’s (2002) model of professional growth in teaching was used to
isolate constructs for investigation (i.e., assumptions about effective teaching and practices
transferred from one format to another) and suggest relevant bodies of literature. The model
identifies four domains:

1. The External Domain is made up of external stimuli outside of the classroom and
   includes activities such as formal faculty development programs.
2. The Domain of Practice is the domain in which actual teaching occurs.
3. The Domain of Consequence is the domain in which the outcomes of teaching
   experimentation are observed.
4. The Personal Domain includes the instructor’s assumptions, beliefs, and knowledge
   about teaching.

Bodies of literature focusing on the Personal Domain are concerned with how instructors
conceive of teaching (Kember, 1997), how they approach teaching activities (Kember & Kwan,
2000), what they know about teaching (Pajares, 1992; Saroyan & Amundsen, 2001) and how
these internal processes and states interact (McAlpine, Weston, Timmermans, Berthiaume, &
Fairbank-Roch, 2006).

The faculty development literature (Amundsen & Wilson 2012; Gaff & Simpson, 1994;
Poole & Iqbal 2011), with its emphasis on formal training and explicit goals, can be situated
within the External Domain. Because the scholarship of teaching and learning (Boyer, 1990;
Shulman, 2000) emphasizes instructors’ engagement in a community of teaching scholars, it is
another area with bearing on the topic of the current study.
The two remaining domains, the Domain of Practice and the Domain of Consequence, constitute the site of actual teaching and interaction with students. Several bodies of literature contribute to an understanding of how instructors learn about and experiment in their teaching. These are experiential learning (Kolb, 1984), informal learning (Marsick, 2009), and self-regulated learning (Zimmerman, 2002). Individual components of these theories can be elaborated by theories of reflective learning (Kreber & Cranton, 2000; Mezirow, 1991) and learning transfer (Perkins & Salomon, 1994).

While much of the research on teaching in general has been covered in the literatures listed above, the study of teaching online has generated its own literature. Sub-fields of this literature include faculty participation in online education (Shattuck, 2012), role changes that occur as faculty move from face-to-face to online teaching (Berge, 1995), competencies for teaching online (Bigatel, Ragan, Kennon, May, & Readmond, 2012), and the ways in which instructors experience online teaching (De Gagne & Walters, 2009).

**Overview of Methodology**

This phenomenological research study collected data in two phases. In Phase One, an online survey was administered to the population of instructors who teach graduate courses for the World Campus. I emailed a request for participation to a distribution list of instructors explaining the purpose of my study and linking to the online survey. The survey had two purposes: 1) to collect data on the kinds of pedagogical change instructors in this population have experienced as a result of teaching online and 2) to recruit and screen a small group of instructors to participate in in-depth interviews. It consisted of questions asking whether the experience of teaching online had had an influence on instructors’ assumptions about effective teaching, their
plans to introduce new teaching strategies, and their actual implementations of new face-to-face teaching strategies.

Eight instructors participated in the Web-based interviews that were conducted during Phase Two. These included initial Web-based interviews that lasted between 60 and 90 minutes as well as a set of shorter follow-up telephone interviews with each of the participants. Interview questions covered information about the instructor’s teaching background, the processes by which the instructor had commonly learned about teaching and learning, the methods used by the instructor to assess student progress, the instructor’s views on how face-to-face and online teaching and learning compared to one another, and the ways in which the instructor experienced professional growth and change as a result of teaching online. Qualitative data collected from both the survey and the interviews were analyzed for themes using a phenomenological approach (Van Manen, 1990).

**Definition of Terms**

*Blended learning*: In a blended learning environment, instructors move some of their classroom activities online and reduce the number of face-to-face class meetings.

*Face-to-face teaching*: This refers to teaching that takes place within a traditional, place-bound classroom.

*Flipped classroom*: Flipping a class is the practice of having students interact with media-based course materials, such as lecture videos and online quizzes, outside of class and using class time for hands-on activities and group work.

*Learning episode*: Each of the interviewees described one or more learning episodes, i.e., instances in which instructors experienced an unsolved problem in their face-to-face teaching that caused them to reflect on their online teaching, make comparisons between the two modalities,
and, as a result, implement some kind of change in their face-to-face teaching. This is the unit of analysis I used in analyzing the interview transcripts.

*Online learning:* In this study, online learning will refer to a primarily asynchronous, distributed mode of learning by instruction in which students interact with their instructor and each other via the World Wide Web.

*Online teaching:* Online teaching refers to instruction in an asynchronous, distributed delivery format.

*Phenomenology:* In the context of this study, phenomenology will refer to the hermeneutical approach to phenomenological research, i.e., the approach in which the researcher seeks to interpret the experiences of the research participants rather than simply describe them. Interpretations are made on the basis of the researcher’s scholarly knowledge and the employment of an appropriate method for analyzing the data.

**Assumptions of the Study**

I began the research with the following assumptions:

- Teaching is a complex activity that involves the development of many different kinds of instincts, skills, and knowledge.
- I believe, as Shuell (1986) does, that “what the student does is actually more important in determining what is learned than what the teacher does” (p. 429).
- I agree with Ragan (2000) that “good teaching is good teaching” (p.13). In other words, despite the differences in delivery format, a primary goal of effective teaching is the creation of an effective learning experience for the student.
Chapter Summary

The purpose of this research project was to investigate the experiences of faculty who taught both online and face-to-face in higher education and who reported having changed their assumptions about effective teaching and their face-to-face teaching practices as a result of teaching online. The findings of this study should contribute to the research on faculty growth and development in both modalities and also provide practitioners with an expanded set of responses to common challenges in face-to-face teaching.
Chapter 2

Review of the Literature

As an investigation into the ways in which the experience of teaching online may influence instructors’ face-to-face teaching practices and assumptions about teaching in general, the scholarly context of this project encompasses the experience of developing oneself as a face-to-face instructor in higher education, making the move into online teaching, and implementing changes to one’s face-to-face teaching practice as a result of that move.

The chapter begins with the literature on the experience of teaching in higher education – ways of conceptualizing teaching and learning, knowledge about teaching and learning, enactment of teaching strategies, and reflection on beliefs, actions, and outcomes. It next covers the research on faculty development, both as a consultative practice carried out by professional faculty developers and a personal pursuit of learning and growth as experienced by instructors. As an extension to the coverage of the personal form of professional development, several learning theories that emphasize autonomy and agency are covered. After a review of the literature on the experience of teaching online, the chapter concludes with a look at the research that has been conducted on the phenomenon experienced by instructors teaching in both online and face-to-face formats whose online teaching experience led to changes in their assumptions about effective teaching and in their face-to-face teaching practices.

The Experience of Teaching

Teaching and learning are widely acknowledged by researchers to be complex, multifaceted processes (e.g., Gaff & Simpson, 1994; Kagan, 1990; Kane, Sandretto, & Heath, 2002; Roche & Marsh, 2000). A considerable amount of scholarly work has been conducted on
the ways that instructors think about teaching and learning and the paths they take from thinking
to action.

**Teaching Conceptions and Approaches**

Much of the research that has focused on instructors’ assumptions about what constitutes
effective teaching in higher education has proceeded within the conceptual framework of the
*conceptions of teaching* and *approaches to teaching* literature. Some authors have noted the
confusing use of terminology within these bodies of literature (Kane, Sandretto, & Heath, 2002;
differentiation: conceptions of teaching refer to the abstract representations and understanding
faculty attach to the practice of teaching in higher education while approaches to teaching refer to
the motivations, intentions, and strategies instructors use in their practice as teachers.

Research into faculty conceptions of teaching was preceded by earlier research into
student conceptions of learning. Marton, Dall’Alba, and Beaty (1993, as cited by Kember &
Kwan, 2000) identified six categories of student conceptions to learning. They are organized here
in a hierarchy from simple to complex:

1. Learning as a quantitative increase in knowledge
2. Learning as memorizing
3. Learning as acquiring facts, skills, and knowledge for later use
4. Learning as making sense
5. Learning as interpreting reality in a different way
6. Learning as changing as a person

The identification of these six categories set the stage for research into conceptions of
teaching held by university instructors. Several such studies (Kember & Gow, 1994; Prosser,
Trigwell, & Taylor, 1994; Samuelowicz & Bain, 1992; Trigwell, Prosser, & Taylor, 1994) were carried out in the early 1990s. In his review of these and others, Kember (1997) found that most of the studies identified categories that closely reflected those identified in the studies of conceptions of student learning.

An important reason to develop a better understanding of conceptions of teaching is to understand how they influence teaching practices and, ultimately, student learning outcomes. For some researchers (Hativa, 2000b; Ho, Watkins, & Kelly, 2001; Kember & Kwan, 2000; Varnava-Marouchou, 2010), the relationship among these variables was causal and unidirectional, i.e., conceptions of teaching drove teaching practices which, in turn, influenced learning outcomes. Both Devlin (2006) and Eley (2006), however, saw this assumption as problematic and called attention to methodological limitations in some of the studies (e.g., Ho et al., 2001) that should prevent such a conclusion from being drawn. Moreover, as Devlin (2006) pointed out, when either behaviors or beliefs changed, the other was likely to follow. Murray and MacDonald (1997) posited the existence of intervening variables between conceptions and actions while other researchers (e.g., Guskey, 1986) argued for a unidirectional relationship in the other direction, i.e., that teaching practices must precede a change in conceptions. It remains unclear if conceptions cause changes in practice, if practice causes changes in conceptions, or if a more reflexive relationship exists between the two.

As was noted in the beginning of this section, the confusing and inconsistent use of terminology has contributed to additional ambiguity in the work on teaching conceptions and approaches. For Saroyan, Dagenais, and Zhou (2009), this suggested the existence of conceptual difficulties with the constructs and their categories. Furthermore, as Kane, Sandretto, and Heath (2002) pointed out, many of the existing studies have relied on instructors’ self-reports about what they did in the classroom. In many cases, these theories-in-action did not actually align with instructors’ espoused theories.
The methodology used in many of the studies of conceptions and approaches to teaching has been that of *phenomenography*, a term not to be confused with phenomenology. Phenomenography aims to identify variations, within a population, of how a phenomenon is understood. Whereas phenomenology looks for common experiential themes across individuals, phenomenography attempts to categorize individuals according to their primary way of experiencing a phenomenon. Martin and Lueckenhausen (2005) asserted that phenomenography is not an appropriate method to provide rich, contextualized description or to record change in an individual’s understanding. In his critique of the method, Webb (1997) noted that phenomenographic researchers bring their own prejudices to their analyses in ways that reproduce the discourses that dominate the phenomenon under investigation. Related to such methodological issues are conceptual discrepancies such as those noted by Saroyan, Dagenais, and Zhou (2009) who pointed out the gaps and overlaps among categories identified within the conceptions of teaching literature.

Henderson (2003) has noted that the major focus within this body of literature has been instructors’ conceptions of their work, i.e., teaching, as opposed to their conceptions of what students do, i.e., learning. If, to paraphrase Shuell (1986), the activities of the student are more important in determining learning outcomes than the activities of the teacher, then an important area of teacher thinking is missing from this literature.

**Content- and Learning-Oriented Teaching**

In his review of research on conceptions of teaching, Kember (1997) used the term *orientation* to encompass two or more categories of conception. He thus identified two orientations found across the 13 studies he reviewed. The teacher-centered, content orientation encompassed those conceptions that align with a knowledge transmission view of teaching. As
described by Ramsden (1992), this orientation sees the instructor as the subject authority in possession of the information to be transmitted to students. Teaching is seen as passing this information on to students and learning is dependent upon their willingness to receive it. On the other hand, a learning facilitation conception of teaching, identified as a student-centered, learning orientation, is one in which the instructor strives not simply to transmit information but rather to make student learning possible. This orientation relies a great deal on the instructor’s understanding of the student’s perspective.

An assumption often made in the literature is that teaching improvement can only be accomplished by changing from a teacher-centered, content orientation to a student-centered, learning orientation. Barr and Tagg (1995) characterized the change as a paradigm shift, one that views the mission of higher education to “produce learning” rather than “provide instruction” (p. 13). Trigwell, Martin, Benjamin and Prosser (2000) included a learning orientation, on the part of the instructor, as one of the four hallmarks of scholarly teaching.

An issue of potential misunderstanding within this area of the literature is whether the teacher-centered, content orientation and the student-centered, learning orientation are mutually exclusive or able to co-exist within an individual instructor’s perspective. Devlin (2006) made the point that, while a focus on high quality student learning outcomes is certainly desirable among university instructors, having such a focus does not necessarily preclude also being concerned with one’s own performance as an instructor. She agrees with Gibbs and Coffey (2004) who suggested that the student focus and teacher focus are not two ends of a continuum but rather two different scales. From this perspective, an instructor may hold both a content focus and a student-learning focus. Akerlind (2003) also views the two conceptions as being able to co-exist within an individual instructor’s viewpoint. However, she problematized the phenomenon by speculating that, while it is possible for an instructor with a primarily learning-centered conception to also
hold a content-centered conception, it is not possible for an instructor whose primary orientation is content-centered to hold a learning-centered conception.

Much of the research on these two orientations has focused on how instructors move towards a learning orientation. Some studies have shown how conceptions of teaching change in this direction after instructors participate in faculty development initiatives (Gibbs & Coffey, 2004; Ho, Watkins, & Kelly, 2001; Postareff, 2007). Others have demonstrated that instructors may become more learning-oriented even without the benefit of any intervention (e.g., Entwistle & Walker, 2000; McKenzie, 2003).

As was mentioned in the previous section, there are contradictions and difficulties in the conceptions/approaches literature. For one thing, the unidirectional, cause and effect relationship between conceptions and approaches has sometimes been overstated. For another, the six categories of conceptions, with their discrete demarcations, do not tell the whole story. When mapped onto the two overarching orientations discussed in this section, they lose even more subtlety. Moreover, the view of the two orientations as mutually exclusive and the privileging of the learning orientation over the content orientation further over-simplifies the complex nature of teaching and teacher development and learning. McAlpine and Weston (2000) acknowledged this complexity by posing the question, “How do we explain that some teachers who do not appear to be student centered are perceived to be excellent teachers?” (p. 377).

**Instructor Knowledge, Cognitions, and Actions**

The previous two sections of this paper have described the literature on conceptions of teaching, approaches to teaching, and teaching orientations. An additional area that warrants attention is that of instructor knowledge. In his often-cited paper on the “messy construct” of teacher beliefs, Pajares (1992) discussed the difference between beliefs and knowledge. He
offered this distinction: “Belief is based on evaluation and judgment; knowledge is based on objective fact” (p. 313). Synthesizing inferences about beliefs that can be made from a review on prior research, he suggested that beliefs act as a filter for new knowledge, thus having an impact on how people interpret, organize, and use it.

Although it is beyond the scope of this paper to present a thorough discussion of the relationship of knowledge to beliefs, the terms may be defined and operationalized for the purpose of this study. Saroyan and Amundsen (2001) provide a useful framework in their Model of Teaching Competency which consists of three elements – conceptions, knowledge, and actions – embedded within a particular instructional context. Conceptions encompass the beliefs instructors hold about what constitutes teaching and learning, the role of the instructor, the ways in which students learn, and the context in which teaching and learning take place. Knowledge refers to subject matter knowledge, pedagogical knowledge, and knowledge about students. Actions encompass both instructional design and classroom teaching. Finally, instructional context “includes all the external factors which influence or are perceived to influence the teaching task” (p. 347). In their model, pedagogical competency is developed by means of an ongoing convergence between conceptions and actions as both are influenced by knowledge and instructional context. In this study, knowledge about teaching will be considered as separate from both conceptions of teaching and teaching practices.

Much of the work on instructor knowledge has proceeded within Shulman’s (1986) framework of pedagogical content knowledge, i.e., the knowledge that instructors bring to bear on their teaching. It encompasses not only subject matter knowledge but knowledge of how to communicate that subject matter to students and an understanding of how students learn the topic, including the mistakes they make, the misconceptions they have, and the scaffolding they may need. A good deal of the research on the development of pedagogical content knowledge has focused on K-12 teachers, especially those teaching science (e.g., Lee & Luft, 2008; Loughran,
Mulhall, & Berry, 2004; Park & Oliver, 2008). There have, however, been some studies situated within higher education. For example, Fernandez-Balboa and Stiehl (1995) conducted a phenomenological study of 10 college professors from a range of disciplines. They identified a small set of sub-components of pedagogical content knowledge that were present across all disciplines. They found it to be strongly influenced by teaching beliefs among their participants. Another study situated within higher education was conducted by Major and Palmer (2002; 2006) who interviewed university faculty participating in a faculty development initiative to design and teach courses using a problem-based learning model. They concluded that the most significant influence the move to problem-based learning had on instructors’ pedagogical content knowledge was the deep thinking about student learning it engendered.

A recent extension to pedagogical content knowledge has focused on how instructors use technology to teach a particular subject (Mishra & Koehler, 2006). Although the so-called technological pedagogical content knowledge framework has relevance to online learning and teaching, it is primarily a framework for studying technology integration, i.e., the ways in which instructors incorporate technology into their teaching. The majority of studies using the framework studied the technological pedagogical content knowledge development of K-12 teachers in a variety of disciplines and grade levels (e.g., Doering, Veletsianos, Scharber, & Miller, 2009; Hofer & Swan, 2006; Lee & Tsai, 2008). Less work has been situated within higher education, although the researchers who developed the framework, Mishra and Koehler (2006), have conducted several studies showing how engaging in technology integration projects influences instructors’ evolving conceptions of technology, pedagogy, and content. In particular, they have shown how these separate components become more integrated within instructors’ conceptions of teaching with technology (e.g., Koehler & Mishra, 2005; Koehler, Mishra, & Yahya, 2007).
Closely related to the topic of instructor knowledge is that of instructor thinking, planning, and enactment in regard to teaching. Malkki and Lindblom-Ylanne (2012) interviewed 76 university instructors to learn about the connection between reflection on practice and their teaching actions. They were especially interested in factors that either prevented or facilitated the enactment of a plan. Preventing factors included lack of time, large class sizes, inaccessibility of appropriate tools and resources, and norms and expectations established by the academic department. Facilitating factors included confidence in one’s teaching expertise, exposure to faculty development activities, and a working environment in which self-expression is valued.

McAlpine and Weston (2000) explored the link between reflection and teaching activities and proposed a model to explain conditions under which reflections lead to actions. Their model includes goals, knowledge, decision-making, action, and monitoring, all taking place within a “corridor of tolerance” which describes the area in which “cues being monitored fall within what the individual deems to be acceptable bounds.” When these cues are observed to move outside of the corridor, “decisions lead to adjustments in action.” McAlpine, Weston, Beauchamp, Wiseman, and Beauchamp (1999) used the model to interview six exemplary instructors about their goals, instructional strategies, and instructors’ evaluation of their progress towards their goals. The outcome of this study was an enhancement to the model highlighting the important role of knowledge and goals.

McAlpine, Weston, Berthiaume, and Fairbank-Roch (2006) interviewed two instructors to understand their thinking when designing a course and planning to teach a particular class session within that course. Analysis consisted of coding the interviews for goal statements and knowledge statements. They concluded that instructors’ thinking in regard to instructional decision-making is an intermediate level between conceptions of teaching and teaching practices. Based on the same data, McAlpine, Weston, Timmermans, Berthiaume, and Fairbank-Roch (2006) proposed four different “zones” in which teacher thinking took place: 1) conceptual, 2)
strategic, 3) tactical, and 4) enactive. The authors were careful to state that the zones were not stages in a process but rather categories of teacher thinking that had a particular set of characteristics. In the conceptual zone, instructors thought and talked about values, beliefs, and internal commitments to teaching. This was the most abstract of the four zones. Thinking in the strategic zone merged the abstract with the practical and focused broadly on a specific teaching task. It was in this zone that high-level course planning took place. In the tactical zone, plans were formed for concrete, specific situations. Processes in the enactive zone occurred “within the context of instruction, in engagement with students” (p. 607). In face-to-face teaching, this was most often in the classroom.

Faculty Development

The term faculty development generally refers to initiatives taken by institutions of higher education to assist faculty in improving their teaching. The Professional Organizational Development Network in Higher Education (2014), the premier professional organization in the United States devoted to this endeavor, defines faculty development as a set of programs aimed at the development of a faculty member as a teacher, scholar, and person, noting that the role of teacher is most commonly associated with faculty development efforts. Professionals who work in this field consult with faculty to provide support in the areas of teaching, course design, content presentation, assessment, and discussion facilitation. Other terms used to describe this type of work include academic development, instructional development, educational development, and professional development (Amundsen & Wilson 2012; Poole & Iqbal 2011).

The notion of institutionally-based, systematic programs in this area began to gain traction in the 1970s. Gaff and Simpson (1994) described several trends during this time that resulted in an increased focus on teaching effectiveness and the establishment of faculty
development centers. These included emerging research on the complex nature of teaching and learning and the growing number of non-traditional students. Camblin and Steger (2000) identified additional factors driving this movement: demands for accountability in higher education by stakeholders and rapid changes in knowledge and technology. All these trends prompted research and development of innovative teaching methods. More recently, teaching has been conceived as a scholarly activity (Boyer, 1990; Shulman, 2000), one that requires faculty to keep current with research on teaching and learning, conduct research-based experiments in their own classrooms, communicate their activities to the field, and adopt a student-centered, learning orientation to teaching (Trigwell, Martin, Benjamin, & Prosser, 2000).

Several authors advocate viewing faculty development through the lens of adult learning. Lawler (2003), for example, noted the benefits of applying the extensive body of research from adult learning to bear on problems in faculty development. She makes the point that adult learners have a powerful need to make meaning of their learning and incorporate it into their daily lives. Her recommendations to faculty developers include designing faculty development programs that build on instructors’ experience and supporting instructors in using their learning for action. In her recent article on faculty development for online teaching, Meyer (2014) argued for the need for more theory-based research. She called particular attention to adult learning theory with its emphasis on self-directed learning (Knowles, 1975; Merriam, 2001), transformative learning theory (Mezirow, 1991), and experiential learning theory (Kolb, 1984).

In their exploration of the scholarly foundations of faculty development, Poole and Iqbal (2011) identified three central aspects of faculty development: 1) facilitating good teaching practice, 2) promoting and managing institutional change, and 3) measuring the impact of faculty development efforts. Carew, Lefoe, Bell, and Armour (2008) discussed the theoretical bases that have been used to study faculty development. They identified three commonly used frameworks:
1) reflective practice (Schön, 1983), 2) collegiality, which they relate to communities of practice (Wenger, 2006), and 3) the scholarship of teaching and learning (Boyer, 1990; Shulman, 2000).

An early model of K-12 teacher development proposed by Guskey (1986), shown in Figure 1, described a process of teacher learning. The model begins with a professional development activity and leads, ultimately, to a change in teachers’ beliefs and attitudes about teaching and learning. Although the phased, linear nature of the model is perhaps an oversimplification, its four main components accurately represent variables of significance involved in teacher learning.

![Figure 1: Guskey’s (1986) model of the process of teacher change](image)

Clarke and Hollingsworth (2002) retained the elements but proposed a more complex, non-linear set of relationships that allowed for multiple starting points and pathways for growth as shown in Figure 2. In this model, formal professional development is represented as an external stimulus of some kind. This external domain is the one component of the model outside of the teacher’s everyday world. The other elements are seen as domains within which potential change may occur. Knowledge, beliefs, and attitudes constitute the personal domain. The domain of practice is the site of professional experimentation. The domain of consequence is the domain in which salient outcomes are perceived by the instructor. In this model, salient outcomes are those which are considered by the instructor to be of interest and value. In addition to Guskey’s
(1986) student learning outcomes, these may include other outcomes of interest to the instructor such as classroom climate or student satisfaction with the course.

Figure 2: Clarke and Hollingsworth’s (2002) Interconnected Model of Professional Growth

While teacher learning may frequently be initiated by external stimuli, it is also possible for it to be triggered by other elements in the model. Clarke and Hollingsworth proposed two types of relationships mediating between elements: 1) enactment and 2) reflection. Enactment is the process by which an instructor puts into action a belief from the personal domain or an understanding of an external stimulus. In general, the impact of enactments occurs in the domain of practice although beliefs from the personal domain may be enacted within the external domain, as when instructors bring their personal beliefs into a professional development activity.
Reflection, of course, is the process by which instructors analyze, interpret, and make sense of phenomena occurring in one or more of the domains. Instructors may reflect on something they observed or learned in the external domain, the domain of practice, or the domain of consequence in such a way as to influence their beliefs and attitudes within the personal domain.

Although the Clarke and Hollingsworth model originated within the context of K-12 teaching, subsequent studies have found it relevant for studying teaching in higher education. For example, Amundsen and Wilson (2012) cited the multiple entry points of the interconnected model as an accurate depiction of the complexity of faculty learning. McAlpine, Amundsen, Clement, and Light (2009) remarked that this model offers academic developers “different points of entry to work with instructors in order to support their development” (p. 272). In her critique of linear, one-way models of faculty development, Devlin (2006) commended the interconnected model as one that reflects the individual, idiosyncratic nature of instructor learning. With its multiple entry points into faculty learning, it is an appropriate reminder of the potential for learning transfer that exists for instructors who teach in both face-to-face and online environments, either in the presence or absence of external faculty development interventions.

The term faculty development can also, but not as commonly, refer to the stages of development through which instructors progress as they develop teaching expertise. Several authors have proposed staged developmental models of faculty learning. Biggs (1999) postulates three levels of development, each one characterized by the instructor’s primary focus. At Level 1, the instructor focuses on differences between students and how these differences influence student success. Instructors at Level 2 focus on what the instructor does to produce learning. Instructors at this level are concerned with their presentation of material, their explanations of concepts, their design of assessments, and their interactions with students. At Level 3, the focus shifts from what the instructor does to what the student does.
Nyquist and Wulff (1996, as cited by Devlin, 2006) also proposed three stages of instructor development. In the “self/survival” stage, novice instructors focus on how well they will fit into the role of teacher. In the “skills” stage, they focus on teaching skills and methods. In the final “outcomes” stage, their concerns are with their students’ learning. Similar to both Biggs (1999) and Nyquist and Wulff (1996), Ramsden (1992) proposed three theories of teaching, i.e., ways that instructors understand the purpose and activity of teaching. He organized the theories from simple to complex. The simplest theory views teaching as telling or transmitting information. A more comprehensive, complex theory views teaching as organizing student activities to ensure that learning occurs. His most sophisticated theory sees teaching as “working cooperatively with students to help them change their understanding” (p. 114). Some authors (e.g., Cruess & Cruess, 2006; Gossman, 2008) have used the Dreyfus and Dreyfus (1980) five stage model of skill acquisition as the basis for their research into developing teaching expertise. The five stages of this model are: 1) novice, 2) advanced beginner, 3) competent, 4) proficient, and 5) expert.

While staged models of instructor development can be helpful in differentiating among degrees of sophistication in understanding the relationship of teaching to learning, their emphasis on a linear path of development does not provide the level of detail needed to examine how mid-career instructors improve their teaching based on their own experiences in practice. Dall'Alba and Sandberg (2006), in their critical review of staged models of expertise development, emphasize the need to situate that development within particular bodies of practice and refrain from over-generalizing and over-simplifying.

While systematic faculty development efforts contribute to an instructor’s growth and learning, many opportunities for professional growth and development also exist in the day-to-day practice of teaching. This notion is supported by studies that have shown how beliefs about teaching can change even when instructors do not participate in faculty development initiatives.
(e.g., Entwistle & Walker, 2000; McKenzie, 2003) as well as the many studies that highlight the importance of on-the-job learning for teaching in higher education. These include studies that acknowledge the phenomenon of learning by doing (e.g., Chism, 2004; Knight, Tait, & Yorke, 2006; Pickering, 2006; Post, 2011; Van Eekelen, Boshuizen, & Vermunt, 2005, Warhurst, 2003) and the influence of peer exchange among instructors (e.g., Hoekstra, Brekelmans, Beijaard, & Korthagen, 2009; Maaranen, Kynaslahti, & Krokfors, 2008) as important factors in learning about teaching.

**Learning Theories That Emphasize Autonomy and Agency**

Lowenthal, Wray, Bates, Switzer, and Stevens (2013) cited evidence showing that systematic faculty development initiatives not only improve teaching but also reduce faculty burnout and promote collaborative learning among faculty. These same authors, however, noted that “[t]ime and competing priorities were the top two obstacles for attending faculty development by faculty across all institutions” (p. 19), a phenomenon that argues for the importance of promoting experiential learning among faculty or, as Knight, Tait, and Yorke (2006) recommended, to consider how to create challenges “likely to evoke fresh learning in the ordinary course of work” (p. 327). This section covers several different, but related, theories that have relevance to workplace and professional learning. They are experiential learning, informal learning, and self-regulated learning. The topics of reflection and learning transfer will also be covered because of their role within each of the three theories.
Experiential Learning

Kolb’s theory of experiential learning (Kolb & Kolb, 2009) has its foundations in the work of Dewey (1938), for whom there was an “organic connection” (p. 25) between learning and personal experience, and Lewin, who theorized about the way people learning from their experiences in work settings (Smith, 2001). Kolb (1984) based his experiential learning cycle upon Lewin’s work, shown in Figure 3. Kolb later modified the model with abbreviated component identifiers, as shown in Figure 4. Some authors (e.g., Chisholm, Harris, Northwood, & Johrendt, 2009) have attributed this basic model to Dewey (1938).

Figure 3: Kolb’s (1984) Lewinian model of experiential learning (p. 21)

In the words of Kolb and Kolb (2009), “[t]his process is portrayed as an idealized learning cycle or spiral where the learner ‘touches all the bases’—experiencing, reflecting, thinking, and acting—in a recursive process that is responsive to the learning situation and what is being learned. Immediate or concrete experiences are the basis for observations and reflections. These reflections are assimilated and distilled into abstract concepts from which new
implications for action can be drawn. These implications can be *actively tested* and serve as
guides in creating new experiences” (p. 44, emphasis in original). Authors who have cited Kolb in
studies of instructor learning include Benander (2009), McAlpine, Weston, Berthiaume, and
Fairbank-Roch (2006), and Van Eckelen, Boshuizen, and Vermunt (2005).

![Figure 4: Adapted from Kolb’s later model of the experiential learning cycle with abbreviated
component identifiers (Kolb & Kolb, 2009, p. 44)](image)

A model similar to Kolb’s has been proposed by Korthagen (2005) to study teacher
learning in K-12 settings. Known as the ALACT model, it included five phases: 1) action, 2)
looking back on the action, 3) awareness of essential aspects, 4) creating alternative methods of
action, and 5) trial. Like the Kolb model, it began with experience or action and moved on to a
reflective observation phase. Where Kolb’s model then moved on to abstract conceptualization,
Korthagen proposed a phase in which the learner becomes aware of essential aspects of the
original action. Kolb’s final phase was experimentation. Korthagen deconstructed this into two
phases consisting of creating alternative methods of action and experimenting with those methods. The Korthagen model is shown in Figure 5.

![Diagram of the Korthagen model]

Informal Learning

Related to experiential learning and also stemming from the work of Dewey and Lewin is the concept of informal learning in the workplace (Marsick, 2009; Marsick & Volpe, 1999; Marsick & Watkins, 2001). In defining and scoping informal workplace learning, Marsick and Volpe (1999) contrasted it with formal workplace learning which is highly structured and often takes place in a classroom or training room. These authors characterized informal workplace learning as being integrated with daily work routines and often influenced by chance and/or triggered by an internal or external jolt. Although it does not usually occur at a very conscious level, it is “an inductive process of reflection and action” (p. 5).
To study informal learning, Marsick (2009) proposed that research examine learning activities and processes such as “experimenting, reflection (meaning- vs. action-oriented), examining one’s own practice, getting and using ideas from others, learning by doing, learning from mistakes, mentoring, coaching, giving and receiving feedback, or conversations with colleagues” (p. 273). Marsick and her colleagues (Marsick, Volpe, & Watkins, 1999; Marsick & Watkins, 2001) proposed and later refined a model that, like Kolb’s and Korthagen’s, depicts learning as a cycle.

**Reflective Learning**

While experience is at the heart of the experiential learning cycle, it is not, on its own, sufficient for learning. In the words of McAlpine and Weston (2000), “turning experience into knowledge may be dependent on the ability to use reflection to recognize patterns in the multiplicity of variables in experiences” (pp. 367-368). Reflective observation is an important component of Kolb’s experiential learning cycle. Donald Schön (1983), known for his work on professional learning and development, emphasized the role of reflection in learning. He distinguished between two types of reflection: 1) reflection-in-action and 2) reflection-on-action. Smith (2001, 2011) explained the former as “looking to our experiences, connecting with our feelings, and attending to our theories in use” (para. 48). This echoes the focus in the ALACT model (Korthagen, 2005) on being aware of essential aspects of a situation. For Korthagen, these essential aspects often include a teacher’s personal feelings about a situation, prior personal experiences, and personally formed meanings. Schön’s second type of reflection, reflection-on-action, is the reflection that occurs after the experience takes place.

Reflection plays an important role in the development of teaching expertise for Kreber and Cranton (2000) who applied Mezirow’s (1991) three levels of reflection to their own three
domains of teaching knowledge. Mezirow’s three levels are: 1) content reflection, which focuses on the actual events that happened, 2) process reflection, which is concerned with the processes by which a task was accomplished or a problem solved, and 3) premise reflection, in which core assumptions about the importance of the events themselves are questioned. Premise reflection is similar to what Brookfield (1995) called critical reflection. For Kreber and Cranton (2000) “[i]nstructional knowledge is concerned with the strategies we use in teaching; pedagogical knowledge is concerned with understanding student learning; curricular knowledge is concerned with why we teach the way we teach” (p. 481). There is an obvious alignment between these domains and Mezirow’s levels of reflection: 1) instructional knowledge entails content reflection, 2) pedagogical knowledge requires process reflection, and 3) curricular knowledge relies on premise reflection.

Just as experience alone is not sufficient to produce learning, neither is reflection, as many authors who study the role of reflection in developing teaching expertise have noted. For Day (1993), reflection must be augmented by teachers communicating with one another. Kreber (2004) has insisted that process and premise reflection must be emphasized over content reflection in order to set the stage for learning. Sockman and Sharma (2008) believe that teachers’ reflective activities must also include reflective dialogue with peers. In addition to peer communication, Korthagen (2005) suggested that instructors’ reflective practices should be structured, grounded in their own personal concerns, and include meta-reflective components. Implicit in Kolb’s model is that reflective observation must be followed by abstract conceptualization. The process of forming such abstractions during cognition is detailed in the literature on transfer (Perkins and Salomon, 1994).
Learning Transfer

Transfer of learning occurred when learning in one context had an impact on behavior in another, related context (Perkins & Salomon, 1994). Near transfer took place when the two contexts were very similar whereas far transfer referred to situations in which the two contexts were more remote. Perkins and Salomon have noted that the likeliness of near transfer is greater than that of far transfer. The following conditions supported, but did not guarantee, transfer:

- Opportunities for thorough and diverse practice
- Explicit abstraction
- Active self-monitoring
- Mindfulness
- Using a metaphor or analogy

In an earlier work (Salomon & Perkins, 1989), these same authors also distinguished between two mechanisms of transfer, low-road transfer and high-road transfer. In their words, “[l]ow-road transfer primarily reflects extended practice; distance of transfer depends on amount of practice and the variability of contexts in which the practice has occurred. High-road transfer, on the other hand, depends on the mindful abstracting of knowledge from a context” (p. 115).

Low-road transfer occurred when a person applied skills learned in one context fairly automatically to a new context. Little reflective thinking was required because the two contexts were so similar. In this type of transfer, skills had become quite automatic in the original context due to extended practice. The authors suggested that the skills became automatic because the learner had the opportunity to practice them repeatedly in a variety of similar, but slightly different, contexts. Thus, practice that occurred in “somewhat related and expanding contexts” (p. 120) would facilitate this type of transfer and contribute to developing expertise.
High-road transfer, on the other hand, involved deliberate reflection and the use of an abstraction that encompassed both the original context and the new context. High-road transfer could occur in two ways. *Forward-reaching transfer* took place when the abstraction was formed during initial learning. When the person experienced the new context, the abstraction was retrieved and applied. *Backward-reaching* transfer occurred when the original learning did not include a formation of an abstraction. In this type of transfer, the abstraction encompassing both contexts was not formed until the person experienced the new context. It was then immediately applied. They asserted that mindful abstraction was necessary for achieving high-road transfer. As Choi and Hannafin (1995) noted, transfer “is influenced by the individual's capacity to represent experience symbolically” (p. 57).

Knight, Tait, and Yorke (2006), in their study of how faculty in higher education learned about teaching, introduced a distinction between two types of learning that is relevant within the context of learning transfer. They distinguished between *vertical* and *horizontal learning*. In their words, “Vertical learning involves the formation of new concepts and structures, whereas horizontal learning involves widening the range of material, settings and problems on which those concepts and structures can be successfully and smoothly deployed” (p. 333).

For Bransford and Schwartz (1999), an important aspect of transfer is *preparation for future learning*. They proposed preparation for future learning as an alternative to what they referred to as *sequestered problem solving*, a method of assessing transfer in which a learner’s success was judged by the accuracy with which an originally learned activity could be replicated by the learner. They argued that assessment of successful transfer should not hinge on one-shot tests but rather should depend on the identification of indicators that learners were on an effective learning trajectory. With its emphasis on readiness for learning, preparation for future learning may be seen as related to self-regulated learning.
Self-Regulated Learning

Self-regulated learning, also known as academic self-regulation, is the process by which learners set learning goals for themselves and regulate their achievement of these goals. In addition to goal-setting, processes involved in academic self-regulation include self-monitoring and self-evaluating, developing and deploying specific task strategies, seeking help appropriately, and managing time (Dabbagh & Kitsantas, 2005). Zimmerman (2002), a prominent expert on self-regulated learning, considers this type of learning to be a critical factor in the development of vital, effective lifelong learning.

Several recent studies have used self-regulated learning to study university teaching. All of them reported that university instructors engage in self-regulated learning processes to some degree. Kreber, Castleden, Erfani, and Wright (2005) found some differences in engagement with self-regulated learning according to instructors’ disciplinary orientation although the authors stated that these data are inconclusive. They also found greater engagement in self-regulated learning activities in the area of instructional knowledge than in the areas of knowledge about students or knowledge about curriculum. Lindblom-Ylanne, Nevgi, and Trigwell (2011) found that self-regulation among university instructors was more common than external regulation. Van Eekelen, Boshuizen, and Vermunt (2005) identified three types of learning with regard to regulation: 1) spontaneous learning occurred when teachers came in contact with some kind of unplanned external influence, 2) non-linear learning occurred when teachers had to solve a problem or accomplish a task that they had initiated, and 3) planned learning occurred when teachers consciously conducted an experiment to learn something. Non-linear learning was reported most frequently.
Teaching Online

In a recent annual report for the Online Learning Consortium, Allen and Seaman (2013) reported that, while enrollments in online courses continue to rise steadily and administrators increasingly view online learning as a strategic imperative for their institutions, faculty acceptance of online learning has risen only slightly from 2002 to 2012.

Literature reviews on barriers and motivators to faculty participation in distance education have identified time demands and increased workload as two of the most commonly cited disincentives to teaching online (Maguire, 2005; Shattuck, 2012). Other inhibitors noted by Shattuck include negative perceptions about the quality of online courses, the absence of student interaction, and the inability to achieve learning objectives in a technology-mediated environment. Concerns among stakeholders about the quality of online education noted in the past (Yang & Cornelious, 2005) continue to linger (Betts, 2014). Some faculty see the move towards distance learning among traditional institutions of higher education as a financially, rather than academically, motivated initiative. Concerns about this issue have been voiced by the Campaign for the Future of Higher Education (2013), an advocacy group representing faculty and student interests in higher education, in a recently published working paper criticizing the profit-making aspect of online higher education.

Regarding incentives and rewards, Wolcott and Shattuck (2007) found that faculty who teach online did so because of intrinsic, rather than extrinsic, rewards. Intrinsic rewards included “providing innovative instruction, developing and applying new teaching techniques, keeping abreast of new technologies, and fulfilling a personal desire to teach” (p. 378). To this list, Thompson (2003) added increased student access to educational opportunities, opportunities for quality interactions with students, flexibility and convenience, new opportunities for research, and positive student outcomes. Chapman (2011) found financial rewards to be a motivator to faculty.
Much has been made of the role changes required of instructors as they move from face-to-face teaching to online teaching. In general, this is seen as a shift from a teaching-centered “sage on the stage” model to a student-centered “guide on the side” model (e.g., Berge, 1995; Conrad, 2004; Mazzolini & Maddison, 2003; Palloff & Pratt, 2000; Ragan, 2008). Conceicao (2006) conducted a phenomenological study into the lived experience of instructors teaching online and concluded that online teaching did indeed require a shift in roles. McShane (2004) conducted a case study of five university lecturers moving from face-to-face teaching to online teaching to discover the changes that might occur in their self-concept as teachers. She concluded that they found ways of preserving the centrality of their role as they moved into the online environment. Crawley, Fewell, and Sugar (2009) studied the “rifts and discontinuities” (p. 165) of one instructor as he shifted from face-to-face to online teaching.

Other studies (e.g., Bigatel, Ragan, Kennon, May, & Readmond, 2012; Goodyear, Salmon, Spector, Steeples, & Tickner, 2001; Thach & Murphy, 1995; Williams, 2003) have identified specific competencies required for teaching online. Although each study presents slightly different lists of competencies, all agree on the general categories identified by Williams (2003): 1) communication and interaction, 2) technology, 3) learning and instruction, and 4) management and administration. The most recent of the studies (Bigatel et al., 2012) identified proficiency in active teaching and understanding of active learning principles as the top two competencies. Lewis and Abdul-Hamid (2006) interviewed thirty exemplary online instructors. Best practices included providing constructive feedback, promoting student interaction and involvement, and maintaining instructor presence. While convergence among competencies has been noted for the most part, a recent critique of the literature on online teaching competencies (Baran, Correia, & Thompson, 2011) proposed that an important item to add to the list is the ability to engage in “continuous process of critical reflection and action” (p. 421).
Two recent articles reported on the results of qualitative meta-synthesis studies, i.e., studies that reviewed several individual qualitative studies about the experience of teaching online and identified themes that occurred across all the studies. De Gagne and Walters (2009) reviewed nine studies about the online teaching experience and identified four themes:

1. Instructors expressed concerns about work intensity resulting from learning new technologies, new work patterns, and sometimes teaching larger classes.
2. Role changes were also mentioned as an item of concern.
3. A third theme concerned implementing new teaching strategies appropriate for an online environment.
4. All the studies concluded that moving from a face-to-face to an online classroom required institutionally-supported professional development for the faculty.

Major (2010) also reviewed nine qualitative studies about the experience of moving from face-to-face to online teaching. She identified these themes:

1. Because the instructor became less central and also because of an increased demand for accountability, instructors adopted a more reserved persona online.
2. Faculty overcame initial anxiety and experience professional rejuvenation with new opportunities to learn.
3. Due to decreased opportunities for spontaneity, instructors had to provide more structure in their lesson plans and teaching.
4. Instructors assumed new responsibilities in regard to technology.
5. Faculty views of time change as specified class times were eliminated and students could initiate contact via email any time they wish.
6. Faculty reconstructed relationships with students within the constraints and affordances of the new environment.
Related to the process of moving from face-to-face into online teaching is that of *flipping the classroom*, i.e. using between-class time to have students engage with online course materials, such as lecture videos and self-graded quizzes, in order to use in-class time for hands-on activities and group work overseen by the instructor. The classroom is thus flipped, or inverted, since students view lectures outside of class and participate in homework-like activities during class time. Bruff (2012) credited Walvoord and Johnson (1998) with first using the term *flipping the classroom* and cites Lage, Platt, and Treglia (2000) with coining the term *inverting the classroom*.

Bishop and Verleger (2013) related classroom flipping to two trends. First, the increasing sophistication and accessibility of instructional technology has provided the necessary infrastructure to make flipping possible. Second, the rise of the open educational resources movement (Atkins, Brown, & Hammond, 2007), manifested in online instructional resources such as MIT’s Open CourseWare Initiative (About OCW, 2014), Khan Academy (2014), and massive open online courses (Kop & Carroll, 2012), has promoted an ideology of open, online learning and resulted in the availability of a large number of high-quality online instructional materials. In their review of the research on classroom flipping, Bishop and Verleger concluded that, while the research on classroom flipping was encouraging in terms of student outcomes, a lack of rigor among the studies precluded a generalizable statement about positive outcomes. They recommended more controlled studies conducted within established theoretical frameworks.

Little research has been conducted on the faculty experience of flipping a class although several recent dissertations have taken on portions of this territory (e.g., Brown, 2012; Horne, 2013; Vande Voort, 2013).
Impact of Teaching Online on Teaching Beliefs and Face-to-Face Teaching Practices

In an early work on how online teaching influenced general teaching practices, Wiesenberg (1999) reflected on her own experience of teaching online and reported that the act of reflection on the differences between the two formats helped her to clarify key assumptions she held about teaching in general. Shea, Pelz, Fredericksen, and Pickett (2002) administered a survey questionnaire to 255 online faculty which focused, in part, on how the experience of teaching online affected their classroom teaching. Over 90% of respondents agreed with the statement that developing and teaching an online course provided them with an opportunity to reflect on their classroom teaching. More than 80% believed that the experience would help them improve their teaching in the classroom.

In a later work by Weisenberg and a colleague (Wiesenberg & Stacey, 2008), an open-ended survey was administered to 12 Canadian faculty and 10 Australian faculty teaching online at similar universities to explore similarities and differences in their teaching philosophies. Both groups reported that they believed their online teaching was too teacher-centered and that they wished they could implement more learning-centered activities for students. Both groups believed that the online and face-to-face formats complemented each other well and that potential existed to transfer strategies from one to the other. In particular, they remarked that the requirement of the online classroom to be more structured, organized, and thoughtful would be helpful in their face-to-face teaching. The faculty from Canada reported further that their online teaching experience helped raise their awareness for the need to “equalize” (p. 70) the voices of students in their face-to-face classes while the Australian faculty reported learning to communicate better in writing from their experience of teaching online. Both groups believed that the online experience helped them become more disciplined and reflective as well as more comfortable with silence in
their face-to-face teaching. The authors concluded that the move from face-to-face to online teaching provided an opportunity for reflection that benefitted the instructors in both formats.

In a qualitative study aimed at discovering how teaching in a blended online program influenced teaching beliefs and practices, Skibba (2009) found that instructors who taught in face-to-face, online, and blended formats changed some of their assumptions about teaching by reflecting on their experiences across formats. McQuiggan (2011) conducted a study to explore how participating in a faculty development program on online teaching influenced participants’ assumptions and beliefs about teaching. Faculty who participated in this study reported a shift in their face-to-face classes toward less reliance on lecture and more focus on learner-centered activities. In a case study of six university instructors converting their face-to-face courses to an online format, Khanova (2012) concluded that the experience of teaching online can lead faculty to experiment with innovation in their face-to-face teaching. In another qualitative study focusing on converting face-to-face courses to an online format, Kampov-Polevoi (2010) reported that the instructors in her study consistently mentioned experimenting with new technologies and strategies in their face-to-face courses as a result of their exposure to the tools and methods they encountered in their course development work.

A slightly different goal was pursued by Meyer (2012) who interviewed 10 experienced university faculty to discover whether teaching online had an impact on their overall teaching productivity. In general, the participants in this study believed that teaching online had made them more productive in their overall teaching. The author withheld speculation as to the reason for this, stating that personal choices, institutional needs, and career stage all combined to contribute to a complex relationship between online teaching and teaching productivity.

A recent article by Rodgers and Talbut (2013) identified some commonly acknowledged benefits that may come about as a result of teaching online. They included improved course planning and organization, re-use of online course materials for face-to-face classes, technology
skill development for instructors, increased emphasis on student-student interaction, and greater use of formative assessment.

Some researchers (e.g., Jaffee, 2003) have wondered whether the experience of teaching online can trigger a move towards a learning-oriented conception of teaching in an instructor. Other authors (e.g., Benson & Brack, 2006; Goss & Boyd, 2003; Kreber & Kanuka, 2006) have speculated that teaching online might act as a trigger for instructors to become involved in the scholarship of teaching and learning.

Lowes (2008) administered a survey to 215 high school teachers to explore the types of changes they experienced in their face-to-face teaching after they had taught online. The most frequently reported changes included redesigning lessons using instructional alignment principles, eliminating poorly designed lessons, and adding lessons from their online courses to their face-to-face courses. Other changes included conducting peer reviews among students, providing more detailed instructions, organizing student groups differently, requiring class contributions from all students, providing more timely feedback, using class time more efficiently, and adding new ways to communicate with students.

Another study from a K-12 setting (Roblyer, Porter, Bielefeldt, & Donaldson, 2009) conducted a survey and follow-up focus groups with teachers who taught both face-to-face and online. Their respondents reported three ways that online teaching influenced their face-to-face practice: 1) increased use of technology for teaching, 2) more use of student-centered teaching, and 3) increased empathy and communication with students. These authors used the term reverse impact (p. 121) to refer to the phenomenon in which online teaching had an impact on face-to-face teaching.
Chapter Summary

This chapter reviewed the literature in five broad categories: 1) the experience of teaching, 2) faculty development, 3) autonomy-oriented learning theories, 4) online teaching, and 5) the impact of teaching online on instructors’ teaching beliefs and face-to-face practices. Studies about the experience of teaching included those focusing on the ways in which faculty conceptualize the practice of teaching, the approaches they take in carrying out that practice, and the knowledge they bring to bear in their pedagogical decision-making. While this vein of scholarly work is rich, far less has been written about instructors’ conceptions of their students’ learning processes and the impact those conceptions might have on teaching practices.

The section on faculty development covered research on faculty development programs and initiatives within institutions as well as the personal learning and growth instructors experience as they develop as teachers. The importance of on-the-job learning was highlighted and provided a segue into several bodies of literature that emphasize autonomy and agency in learning such as experiential learning and self-regulated learning.

The review of the literature on online teaching covered barriers and motivators, role changes experienced by instructors when they begin teaching online, competencies required for teaching online, and a brief discussion on flipping the classroom. Although many of the studies focusing on role changes have noted that the shift required of instructors is not trivial, very few studies have examined how such role changes might influence instructors’ ongoing face-to-face teaching practice.

The final section of this chapter reviewed the small body of literature on the ways in which instructors’ face-to-face teaching practices and assumptions about effective teaching changed as a result of teaching online. While none of the studies considered the breadth of changes captured by the current study, each reported findings that are consistent with the findings
of this study. Several found that instructors who taught online reported that the experience helped them improve their face-to-face teaching and provided opportunities for reflecting, questioning assumptions, and considering a more student-centric view. Another commonly mentioned change was an increased focus by instructors on strategies that promoted student engagement with the course content and with one another. Instructors also developed a greater appreciation for the influence their own communications had on students. Remaining benefits of teaching online included the re-use of digital materials prepared for online courses and improvements in instructor technology skills and course planning practices.
Chapter 3
Methodology

Qualitative research methods seek to understand and describe complex phenomena situated in specific, naturalistic contexts. The primary focus of this study was the collection and analysis of qualitative data to explore the influence that teaching online may have had on instructors who also taught face-to-face. Data were collected in two phases. In Phase One, a survey was administered to instructors of online graduate-level courses for two purposes: 1) to collect data from the target population about teaching experience, attitudes, and professional practices, and 2) to recruit participants for the interview phase. Data collection in Phase Two consisted of a series of Web-based and telephone interviews with eight instructors who taught both face-to-face and online. Qualitative data from both phases were analyzed using a phenomenological research approach (Van Manen, 1990). The following sections describe phenomenological research, identify the target population of participants, and outline the study’s data collection and analysis procedures.

Phenomenology

Qualitative research methods are used to study individuals and small groups of people in great depth, often from the perspective of the research participants. Studies in this tradition are well-suited to theory generation for phenomena that are not well understood. When changes occur during the course of a qualitative study, its data analysis methods are designed to use those changes to inform the ongoing progress of the study. Phenomenology (Creswell, 2007) is one such method.
Creswell (2007) defines phenomenological research as a method of study that aims to describe “the meaning for several individuals of their lived experiences of a concept or a phenomenon” (p. 57, emphasis in original). He goes on to say that “[t]he type of problem best suited for this form of research is one in which it is important to understand several individuals’ common or shared experiences of a phenomenon…in order to develop… a deeper understanding about the features of the phenomenon” (p. 60). Because my study sought to understand the experience of changing one’s assumptions about effective teaching and/or modifying one’s teaching practices as a result of teaching online, it was well suited to the phenomenological approach. Additional support for this decision draws on Van Manen (1990), who wrote from the perspective of an educator interested in conducting educational research. He noted that “pedagogy requires a phenomenological sensitivity to lived experience…in order to see the pedagogical significance of situations” (p. 2). One may infer from this that phenomenology is particularly suited to studying people’s experiences of learning. A specific goal of this study of faculty learning was to discern the “pedagogical significance” of the online teaching experience for the teacher. Akerlind (2003) made the point that an important factor in understanding how to optimize faculty development initiatives is “to investigate academics’ understandings of their own development as a teacher” (p. 378).

Although phenomenology has become a commonly acknowledged form of qualitative research, it refers also to the philosophical movement of the same name founded by Edmund Husserl (Beyer, 2013). For Husserl, phenomenology “always begins in the lifeworld” (Van Manen, 1990, p. 7), i.e., the world as it is experienced by people. In his view, the lifeworld is in contrast to the viewpoint that objects in the world exist independently; certainty can only be achieved through one’s experience (Groenewald, 2004). Rooted as it is in this philosophy, phenomenological research values individual experience and seeks to understand it.
Creswell (2007) identified two major streams of phenomenological research. In *hermeneutical phenomenology*, the researcher aims to interpret the experiences of the research participants within a specific theoretical framework. *Transcendental phenomenology*, on the other hand, “is focused less on the interpretations of the researcher and more on a description of the experiences of the participants” (Creswell, 2007, p. 59). My study follows the tradition of hermeneutical phenomenology.

Patton (1999) and others (e.g., Merriam, 1995) have characterized the researcher as the instrument of data collection and analysis in qualitative inquiry. This is especially true in the context of hermeneutical phenomenological research. Hermeneutical researchers design interview protocols using their knowledge of the relevant literature, their familiarity with the context in which the topic of study is situated, and their curiosity about the topic. They act as data collection instruments during interviews when they attend sensitively to the responses of the interviewees and follow up on particularly significant remarks with relevant probe questions. They act as instruments of analysis when they engage in activities required by thematic analysis. For Van Manen (1990), thematic analysis begins with hermeneutic phenomenological reflection, an activity which is “both easy and difficult” (p. 77). It is easy because, as humans in the lifeworld, we engage in reflection every time we assess a situation and make a decision based on that assessment. For hermeneutical researchers, however, it is difficult precisely because they must employ a type of reflection that exceeds these everyday conditions. This type of reflection requires a sustained consideration of the data in relation to the research questions and an ongoing engagement in the processes of classification, re-classification, and, finally, synthesis.

Van Manen (1990) proposed six activities for the researcher involved in hermeneutical phenomenology:

1. *Turning to a phenomenon that is of serious personal and/or professional interest.*

This study was motivated by my close work with instructors who teach both online
and face-to-face. I realized, over many conversations with instructors from both
groups, how similar some of their concerns were.

2. **Investigating the phenomenon as it is lived rather than how it has been**
   conceptualized. The literature review in Chapter 2 of this document describes the
   ways in which instructor knowledge and faculty development have been
   conceptualized in the literature. My study seeks to understand how instructors who
   experience a specific kind of learning and change make meaning, for themselves, of
   that experience.

3. **Reflecting on the essential themes of the phenomenon as they emerge through contact**
   with participants in the study. To accomplish this, I wrote notes and annotations for
   each of the source documents I included in the data analysis I conducted using Nvivo
   (2014), a software application for storing, coding, and modeling qualitative research
   data.

4. **Developing a description of the phenomenon through writing and rewriting.** I used
   Braun and Clarke’s (2006) six-step process to conduct a thematic analysis on the
   data.

5. **Maintaining a strong pedagogical relation to the phenomenon, i.e., preserving a**
   committed curiosity that rejects superficial inferences. I accomplished this in the
   coding and re-coding of themes as well as the member checks and follow-up
   interviews I carried out.

6. **Balancing the research with an analysis of the parts as well as a consideration of the**
   whole of the phenomenon. Van Manen (1990) believed that phenomenological
   researchers can sometimes become so focused on aspects of the study that they lose
   sight of one of the main goals of such a study, i.e., to produce a text with “revealing
power” (p. 33). During my data analysis, I returned again and again to my research questions to ensure that I was always moving towards answering them.

**Methodological Rigor in Qualitative Research**

Methodological rigor in research refers to a set of criteria according to which a study is conducted in order to satisfy expectations of accountability. Lincoln and Guba (1986) asserted that the following four criteria are used to ensure rigor for quantitatively-oriented studies undertaken within the conventional scientific paradigm:

1. Internal validity refers to the truth value of the inquiry.
2. External validity describes the extent to which the study’s findings are generalizable.
3. Reliability refers to the consistency and replicability of the data collection instruments.
4. Objectivity denotes neutrality on the part of the researcher.

Phenomenology is a qualitative research method. As such, it values, rather than seeks to minimize, the idiosyncratic experiences of research participants. Moreover, because “the researcher is the instrument” (Patton, 1999, p. 1198) in qualitative research, the researcher’s subjectivity is valued as well. Notwithstanding the differing values of qualitative and quantitative research, rigor is possible to be achieved in qualitative research. Lincoln and Guba (1986) used the term *trustworthiness* as the qualitative analog to rigor and propose four criteria analogous to those mentioned above. Table 1 lists the original quantitative-oriented criteria along with the corresponding proposed criteria for use in qualitative research studies.

To achieve credibility, Lincoln and Guba recommended prolonged engagement and persistent observation. This promotes the identification of situational saliencies and possible sources of distortion. They also suggested the use of triangulation to cross-check the accuracy of
the data, peer debriefing to enable review by a disinterested third party, assiduous negative case
analysis to verify the exclusion of cases, and member checks with research participants to
confirm conclusions. Shenton (2004) elaborated on these recommendations and made further
suggestions. He recommended that researchers provide a transparent description of their
qualifications for conducting the study and become as familiar as possible with the culture of the
organization to be studied. In conducting the study, researchers should use recognizable,
acknowledged methods for collecting and analyzing data and keep a reflective journal during
each data collection cycle with commentary about the effectiveness of the process as well as
impressions of emerging themes in the data. During interviews, researchers should take steps to
ensure honest responses from participants and utilize iterative questioning when appropriate.
Finally, in writing up the report, researchers should frame the findings within the context of
previous research.

<table>
<thead>
<tr>
<th>Quantitatively-oriented research criteria</th>
<th>Qualitatively-oriented research criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal validity</td>
<td>Credibility</td>
</tr>
<tr>
<td>External validity</td>
<td>Transferability</td>
</tr>
<tr>
<td>Reliability</td>
<td>Dependability</td>
</tr>
<tr>
<td>Objectivity</td>
<td>Confirmability</td>
</tr>
</tbody>
</table>

Table 1: Criteria to ensure methodological rigor in quantitative and qualitative studies

For Lincoln and Guba (1986), transferability is promoted by providing a sufficiently
comprehensive description of the results of the study so that readers may make an appropriate
judgment as to the fit with their own contexts. To achieve dependability and confirmability, they
advised conducting an external audit by a neutral third party examining the data collection and
analysis process as well as the interim and final data interpretations developed by the researcher.
Shenton (2004) made additional suggestions on how to promote dependability and confirmability.
For dependability, he advised the use of overlapping data collection methods, e.g., using both interviews and focus groups. He also advocated a meticulous description of the methodology to ensure that the study can be repeated with a high degree of fidelity. Such a description would assist in promoting confirmability, as well as dependability, by enabling close scrutiny of research results. Other suggestions for achieving confirmability included a statement by researchers about their assumptions and beliefs, a discussion of the study’s limitations and shortcomings, and the use of diagrams for demonstrating an audit trail.

Many elements of my study align with these criteria. As a start, the researcher’s professional experience provides the familiarity with the culture of higher education that both Shenton (2004) and Lincoln and Guba (1986) specify as important criteria to enhance credibility. I am familiar with and sympathetic to the challenges, requirements, and goals of teaching in higher education. My experience in face-to-face and online teaching as well as my ongoing work as an instructional designer and faculty developer enabled me to formulate the right questions and conduct interviews with faculty in such a way as to be attuned to the situational saliencies noted by Lincoln and Guba. My academic preparation as a PhD candidate in Adult Education included several courses on research design and methods as well as courses on the use of qualitative data analysis tools such as Nvivo (2014) and statistical tools such as Minitab (2014).

I have also participated in the design, conduct, and publication of several qualitative research projects. For example, a colleague and I designed and conducted a mixed-methods study examining the use of Web 2.0 technologies by adult distance students (Kearns & Frey, 2010). Data collection was accomplished by means of a survey followed by a series of focus groups. Data analysis used both quantitative and qualitative methods. I designed and conducted another mixed-methods study investigating online faculty practices for assessing student learning in online courses (Kearns, 2012). In that study, I examined online course documents and conducted interviews with faculty about challenges and lessons learned about student assessment in their
online teaching experiences. It was during the data collection phase of that study that I first became aware of the experience some instructors had of transferring or adapting teaching strategies from their online to face-to-face classes.

Additional reinforcement for credibility is rooted in the data collection practices I used. As Shenton recommended, I followed standard, recognized procedures for conducting qualitative interviews outlined by leading experts (Charmaz, 2006; Creswell, 2007; Van Manen, 1990). During the interview phase, I used iterative questioning, both in the form of immediate probe and follow-up questioning as well as member checks with research participants to confirm my interim findings. In the early phases of my data analysis, I realized that there were some gaps in my data, especially in regard to my first research question. That question focused on how instructors experienced the phenomenon of pedagogical change. I found that, in some cases, I did not have enough detail for a thorough description of the pedagogical change experience. I emailed my interviewees and requested a brief, second interview. Fortunately, all of the instructors who remained in the study at that point consented graciously. The protocol I used for those interviews was shaped by comments each had made in the first interview.

Related to the topic of data collection is that of triangulation, i.e., the use of multiple data sources to cross-check the accuracy of data. Triangulation was promoted through the use of a survey phase and an interview phase. During the interview phase, I collected syllabi, rubrics, assignment instructions, and other relevant course materials. Two of the interviewees gave me access to their online courses and one instructor shared some lecture videos with me that he had created. The collection of data from multiple sources and by multiple methods thus enhanced both credibility and dependability.

Finally, there are several practices to which I adhered in my reporting to assist me in meeting the four criteria. I provided a thorough, context-rich description for each interviewee in order to assist the reader in assessing the fit of these data with their particular situation as
recommended by Lincoln and Guba (1986) to achieve transferability. Related to this, and following Shenton’s (2004) advice to enhance dependability and confirmability, I have also provided a detailed description of my methodology to ensure faithful reproduction of the study and to facilitate scrutiny of the results. To further enhance credibility, I have framed the findings in the context of previous research, noting the limitations and shortcomings of the current study. Acknowledging Patton’s (1999) characterization of the researcher as instrument, I included a statement in Chapter 1 about my assumptions going into the study.

**Population**

The World Campus (n.d.) of the Pennsylvania State University was launched in 1998 as the online delivery unit for university degree and certificate programs targeted primarily to adult learners (Nagel, 2013). Recently celebrating its 15\textsuperscript{th} anniversary, it now enrolls nearly 12,000 students in more than 90 undergraduate, graduate and professional education programs (Aneckstein, 2013). Because Penn State is a dual-mode institution (Moore & Kearsley, 2005), i.e., one that offers both face-to-face and online education, World Campus instructors were an appropriate population for this study given the likelihood that they would have had experience teaching in both modalities. To further promote homogeneity among participants and define some boundaries around the population, only graduate instructors were asked to participate in the study. As I have argued elsewhere (Kearns, 2008), graduate students bring certain characteristics, e.g., mid-career experience and orientation, to the classroom that instructors can use in designing instruction. Although the survey invitation was emailed only to instructors teaching graduate courses for the World Campus, some of the instructors whom I interviewed also taught undergraduate face-to-face classes.
The World Campus’s graduate programs include 30 masters’ degree programs and 22 post-baccalaureate certificate programs. The instructors who taught in these programs were the target population for this study. In the fall of 2013, I was granted permission from the Director of Graduate Programs for the World Campus to recruit participants from this population.

Data Collection

Data collection for this study was carried out in two phases. In Phase One, quantitative data were collected by means of a simple survey administered online using Survey Monkey (2012). In Phase Two, several survey respondents were recruited to participate in interviews.

Phase One Data Collection

Although the exploratory nature of the research questions strongly suggested the use of interviews to collect rich, contextualized reports of the phenomenon, a survey instrument was needed to provide access to an appropriate sample. Participants for the survey phase of the project were recruited via email using the distribution list of 319 World Campus graduate instructors I received in October of 2013 from the Director of Graduate Programs for the World Campus. The recruitment email message is included in Appendix A. I removed three email addresses that belonged to my committee members. Six others had undeliverable email addresses. Therefore, the recruitment message reached 310 instructors.

The primary purpose of the survey administered in Phase One via the SurveyMonkey (2014) system was to screen and recruit participants for the interview phase. To accomplish this, the survey instrument included both Likert-style and open-ended questions about changes instructors may have experienced as a result of teaching online. Questions focused on
assumptions about effective teaching as well as plans and implementations of teaching and learning strategies.

Respondents who reported that they had experienced changes as a result of teaching online were asked if they would be willing to participate in an interview about their experiences. Those who answered affirmatively to the interview question constituted the sampling frame. Because the purpose of this study was to investigate the experience of instructors whose face-to-face teaching practices and/or assumptions about effective teaching changed as a result of teaching online, respondents who reported no change were not asked to participate in the interview phase. After willing respondents were selected, they were contacted and asked to schedule a 60 to 90 minute Web conference interview. The complete survey instrument is included in Appendix B.

Nine respondents were selected using a purposeful sampling strategy (Patton, 1990). Purposeful sampling, which is commonly used in qualitative studies, is accomplished by “selecting information-rich cases for study in depth” (emphasis in original) in order to “learn a great deal about issues of central importance to the purpose of the research” (p. 169). The primary selection criterion was the degree to which the respondent articulated an answer to the open-ended questions. So, even if a respondent indicated a willingness to be interviewed, lack of a response on the open-ended questions resulted in a lesser likelihood of being invited to be interviewed. Using this strategy, I was able to select candidates whose responses represented a variety of ways in which teaching online had influenced their assumptions about effective teaching and their face-to-face teaching practices.

A secondary purpose of the survey phase was to collect information about the phenomenon under study. Survey respondents were asked what subjects they taught and the length of time and degree of engagement in which they had taught both online and face-to-face. For respondents who reported having experienced some kind of change as a result of teaching
online, the survey instrument included two open-ended questions asking for a brief description of either a change in the respondent’s assumptions about effective teaching or a change in the respondent’s activities in the face-to-face classroom. An additional open-ended question was included asking whether the instructor had experienced any other kind of change related to teaching as a result of teaching online.

Conducting interviews is time-consuming and must be limited to a small number of participants. To counterbalance the small sample size used in the interview phase, these short qualitative responses collected by the survey were able to contribute additional detail to the more complete data collected via the interviews.

In an often-cited study on methods for investigating teacher cognitions, Kagan (1990) advocated the use of data collection strategies, not only because triangulation of data strengthens validation but also because it promotes the capture of the “complex, multifaceted aspects of teaching and learning” (p. 459). Her description of the complex and multifaceted nature of teaching and learning speaks directly to the defining features of my study. The investigative focus of my study needed not only to account for the everyday complexities of face-to-face teaching and learning; it also had to incorporate issues involved in teaching in an entirely different format as well as examine the phenomenon of transfer between the two modalities.

### Phase Two Data Collection

After selecting and confirming the Phase Two interview participants, Web-based interviews using GoToMeeting (n.d.) were scheduled with each participant. Interviewees were prepared to spend 60 to 90 minutes being interviewed. Interview questions covered information about the instructor’s teaching background, the ways in which the instructor had commonly learned about and experimented with new teaching strategies, the methods used by the instructor
to assess student progress, the instructor’s views on how face-to-face and online teaching and learning compare to one another, and the actual impact of online teaching on the instructor’s face-to-face teaching. The interview format followed Patton’s (1990) Interview Guide Approach in which a specified foundational list of interview questions is posed with opportunities to vary questions depending on individual responses. The foundational interview protocol is given in Appendix C.

Interview questions were based on a synthesis of research and my own experience in working with instructors who move from face-to-face to online teaching. Research studies that had particular relevance to the development of interview questions were those conducted by Ambrose, Bridges, DiPietro, Lovett, and Norman (2010), Clarke and Hollingsworth (2002), Ho, Watkins, and Kelly (2001), Kolb and Kolb (2005), Korthagen and Kessels (1999), McAlpine, Weston, Berthiaume, and Fairbank-Roch (2006), O’Neal, Meizlish, and Kaplan (2007), Schön (1983), Shulman (1987), and Van Eekelen, Boshuizen, and Vermunt (2005).

**Data Analysis**

Data analysis occurred in two phases, each phase following its respective data collection phase. Thus, the quantitative and qualitative data collected in Phase One were initially analyzed after that phase’s data collection. As the Phase Two data were collected and analyzed, the qualitative data from the survey were re-analyzed along with the other qualitative data collected from the interviews.

The survey recruitment email announcing the open survey was sent out on October 9, 2013. The survey remained open until October 28, 2013. After it closed, response data were downloaded into a Microsoft Excel (2014) spreadsheet. Simple frequency analysis was conducted on the demographic data collected by the survey. These data included number of years an
instructor had taught online and face-to-face, the number of courses the instructor had taught in each format, and the subjects taught by the instructor. Open-ended responses to questions about the impact online teaching may have had on teaching beliefs, plans, and strategies were stored for analysis along with the interview data collected in Phase Two.

Respondents were classified according to whether they were willing to be interviewed. Those who were willing to be interviewed were rated on a scale from 1 (low) to 4 (high) according to the completeness of their answers on the open-ended questions and the extent to which their answers reflected a variety of changes across respondents. Out of the 29 respondents who indicated they would be willing to be interviewed, 10 were given a 3 or 4 rating. All 10 of those instructors were emailed. Nine of them responded and scheduled interviews. Four interviews were conducted in December, 2013 and five in February, 2014. Interviews lasted between 45 and 75 minutes. The interviews were audio-recorded and sent to a transcription service for transcribing. I created three- to four-page summaries based on the transcriptions to remove the off-topic utterances and achieve a more readable document. I sent these summaries to each of the interviewees as a means of member checking, i.e., giving the interviewees an opportunity to check my characterizations of the data against their own perceptions. Eight of the nine interviewees approved the summaries. The ninth interviewee did not respond to the three emails I sent requesting her approval. Because member checking and follow-up were important aspects of my methodology, I decided to exclude her data from the results. The remainder of the research was conducted without her data.

For Van Manen (1990), phenomenological themes are the “structures of experience” (p. 79, emphasis in original). Thus, “when we analyze a phenomenon, we are trying to determine what the themes are, the experiential structures that make up the experience” (p. 79). Braun and Clarke (2006) describe a six-step process for conducting thematic analysis that can be used across
a number of theoretical and epistemological approaches to qualitative research (e.g., phenomenology, grounded theory):

1. Becoming familiar with the data to form initial impressions
2. Generating initial codes that reflect interesting features of the data set
3. Searching for themes and collating codes into potential theme categories
4. Reviewing themes to build a thematic map of the analysis and to ensure that they reflect both the codes and the overall feel of the collected data
5. Defining and naming themes as a means of refining the story of the data
6. Selecting examples to include in the final report

Following Braun and Clarke, I familiarized myself with the interview transcripts and generated initial codes for each one. Coding was accomplished using Nvivo (2014), a software application designed for qualitative data analysis. Initial coding focused on the discovery of interesting features in the transcripts and was conducted without regard to any higher-level categories. After all the transcripts were coded in this way, I began searching for themes to tie the codes together. Although I was able to see categories of face-to-face teaching strategies that instructors had implemented as a result of teaching online, I was not able to discern clear themes accounting for the observations, reflections, and reasoning that accompanied their decision-making. In other words, I could see that more than one instructor had created video lectures or implemented online quizzes or restructured assignments, but I was missing information about the evaluation and decision processes that led to the implementation of those strategies.

As a means of filling in these gaps, I emailed the eight instructors and requested a brief, follow-up interview with each. For each of the follow-up interviews, I reviewed the codes from the original interview that pertained to implemented or planned strategies. In conducting the second interviews, I focused on the process that led to the instructor’s decision about implementing a particular strategy, asking questions such as “What led you to think such a
strategy would benefit your face-to-face students?” and “What was it about teaching online that made you attentive to the need for such a strategy?” Combining the transcripts from the second round of interviews with those of the first round provided ample information on the decision-making processes involved in the pedagogical change experiences of the instructors.

**Chapter Summary**

This qualitative research study collected data in two phases. In Phase One, a brief survey containing Likert-type questions and open-ended prompts was used to collect data about the phenomenon under investigation and to recruit participants to be interviewed. Interviews were conducted in Phase Two and the transcripts analyzed for themes following a phenomenological approach (Van Manen, 1990). The population for the study consisted of 310 instructors who taught online graduate courses for Penn State’s World Campus. Nine volunteers were selected to participate in the interview stage. One dropped out before the second round of interviews was complete. Therefore, the final group of interviewees consisted of eight instructors, each participating in two interviews.
Chapter 4

Findings

This chapter describes the findings from both phases of data collection. Included in the quantitative data collected by the Phase One survey were some basic demographic data about the respondents as well as data representing self-selection into one or more categories of pedagogical change respondents had experienced as a result of teaching online. Qualitative data collected in this phase focused on changes in assumptions about effective teaching and/or successful student learning and on teaching strategies instructors had planned or implemented in their face-to-face classrooms as a result of teaching online.

After the survey closed at the end of October 2013, but before the interviews began in December 2013, I began a close review of the qualitative survey data for the dual purpose of identifying potential interview candidates and creating some preliminary codes. Although the qualitative data from the survey existed as short responses, they nevertheless provided a rich resource for initial coding. I was able to cluster those codes into preliminary themes. These are presented as Phase One themes.

Phase Two data were collected by means of two Web-based or telephone interviews with eight instructors. Findings from this phase included data describing each instructor’s teaching experience, short summaries of each instructor’s particular areas of focus and concern within the interviews, and the final theme categories that emerged as a result of the analysis conducted on the interview data. Qualitative data from the survey were then incorporated into these final categories.
Survey Results

An email invitation to complete the survey was sent to 310 World Campus instructors on October 10, 2013. The survey remained open until October 28, 2013. During that time, the survey was completed by 78 instructors, an even 25% response rate. While this rate may be considered low for measuring effects or making generalizations, it was perfectly adequate for the purpose of this study, i.e., to collect data about sample strategies transferred from the online to face-to-face teaching environments and to recruit participants for the interview phase of the study. The survey eliminated 15 others via conditional branching. Following two questions about online teaching experience, the third question asked whether the respondent also taught face-to-face classes. A “No” answer branched to the end of the survey. Of the remaining 63 instructors who taught in both formats, 29 indicated that they would be willing to be interviewed. The data presented in this section focuses on the 63 respondents who reported teaching in both formats.

Frequency Distributions

Two survey questions asked about length of teaching experience. As might be expected, the majority of respondents reported fewer than five years of online teaching experience. No one reported more than 15 years of online teaching experience. On the other hand, a third of the respondents reported having more than 20 years face-to-face teaching experience. Almost two thirds of the 63 respondents had more than six years of face-to-face teaching experience. The distribution, shown in Figure 6, indicates a range of face-to-face teaching experience leaning towards more experienced teachers. Reflecting the more recent entry of online teaching, the distribution shows almost two thirds of the respondents having less than five years’ experience in that modality.
Figure 6: Years of face-to-face and online teaching experience

Question 6 of the survey asked respondents to select, from a list, the graduate program(s) in which they taught. The list was based on the graduate certificate and degree offerings that were advertised on the World Campus Web site (Degrees and Certificates, n.d.) when the survey was created in the summer of 2013. Figure 7 shows the distribution of disciplines represented. The majority of respondents chose only one program but a few chose more than one. In most cases in which respondents chose multiple programs, it was obvious that they taught within one discipline. For example, one respondent chose three different programs within Business and Management. This respondent’s choice on the graph in Figure 7 is represented as one instance of Business and Management. Respondents whose multiple selections were impossible to resolve are represented in the “Multiple” category. The largest number of selections fell into the “Other” category, indicating perhaps that respondents were unable to find an appropriate category on the list or that they were uncertain about the exact name of the program in which they taught. The next largest categories were Business/Management (10 respondents) and Education (9 respondents).
Another question asked about the kinds of change respondents had experienced as a result of teaching online. This question presented respondents with a list of six choices, shown in Table 2. The percentages do not add up to 100 as most respondents reported more than one category of change.

The survey also asked the following open-ended questions:

1. If the experience of teaching online has had an impact on your assumptions about effective teaching and/or successful student learning, please provide a brief description.

2. If the experience of teaching online has led you to plan and/or implement a new teaching strategy or learning activity in your face-to-face classroom, please provide a brief description of one such strategy/activity.

3. Has the experience of teaching online resulted in any other changes that you would like to describe?
Table 2: Categories of change reported on survey

For the first question, about effective teaching and successful learning, 44 out of 63 respondents provided an answer. Responding to the question about the kinds of changes they had considered implementing or actually implemented in their face-to-face classes, 41 instructors responded, 34 of whom provided a brief description of a teaching strategy they had implemented or planned to implement in their face-to-face classroom as a result of teaching online. For the final question, asking about other changes, there were 30 responses. Themes that emerged from these open-ended responses are described in the following section.

**Phase One Themes**

Because the qualitative data gathered from these questions were disembodied from the richer context of conversational interviews, the thematic analysis conducted on these data covered only the first two steps of Braun and Clarke’s (2006) six-step process: 1) becoming familiar with the data and 2) generating initial codes that reflected interesting features of the data set. The four
themes that emerged reflected areas of focus and concern across all survey respondents. Although comments exemplifying these themes were able to be captured on the survey, they could not be represented in the same kind of coherent model developed as a result of the interview transcript analysis and included in Chapter 5. All four themes, however, are subsumed within the final proposed model. These Phase One themes denote areas of focus reflected in the responses to the open-ended survey questions:

1. The social and communicative aspects of learning
2. Student learning processes
3. Assessment strategies
4. Opportunistic re-use of course materials developed for the online environment

In addition to the responses that clustered within the four themes, a few instructors made negative comments about the effect teaching online had had on their overall productivity. Examples of these are provided at the end of this section.

Social Aspects of Learning

A dominant theme was the social and communicative aspect of learning, an important element in constructivist theories such as situated learning (Brown, Collins, & Duguid, 1989) and communities of practice (Wenger, 2006). The following quotes exemplify changes in assumptions about teaching and learning regarding this theme:

- “The quality of teacher-learner relationship influences the quality of learning more than I had thought previously.”
- “Personal communication is essential. Establishing an environment in which the instructor communicates individually/personally with students and where students are comfortable asking questions creates a more productive learning environment.”
- “I have also learned the value of helping students create their own learning communities, because that is necessary in the online environment if the course I teach is to have much value.”
- “Students learn through group interactions even in online environment. … They really want to interact.”
- “It has fundamentally changed the ways that I think about student interaction; the rate and schedule of how I check in and communicate with students.”

In addition to quotes that exemplified changes in assumptions about effective teaching in general, respondents also provided examples indicating changes that occurred in their face-to-face teaching practice:

- “After teaching online, I would make a significant effort in my classroom teaching to establish personal communications with students, either in class or in labs.”
- “I incorporate more group work in the classroom now.”
- “I include more hands-on, team-oriented activities in the physical classroom than I did before I started teaching online.”
- “Online reinforces the need to provide feedback early and often in all courses.”
- “I have begun sending e-mails between face-to-face classes to reiterate materials we study in class.”

**Student Learning Processes**

Another dominant theme that emerged was the focus on how students learn. On one hand, the instructors in this study developed insights about what students could do on their own. On the other, their appreciation for group work and student-instructor contact increased. These insights
can be classified according to Moore’s (Moore & Kearsley, 2005) three types of interaction: 1) learner-content, 2) learner-learner, and 3) learner-instructor.

In the area of learner-content interaction, references were made to the importance for students to do some independent learning and engage with the material in a variety of ways. Regarding learner-learner interaction, respondents asserted that it is important for students to interact with one another and for them to take initiative in group interaction. As mentioned above, learner-instructor interaction is manifested in the instructor’s initiation of communication with the student to check progress as well as to develop a solid relationship.

Statements exemplifying the instructor’s focus on how students learn took the form of insights, hypotheses, and propositions about the extent to which certain activities and processes contribute to student learning:

- “I no longer assume that lecture is the most effective way of teaching.”
- “Online interaction forces students to do the readings before they can carry out the week's exercises, submit postings, and participate in discussions.”
- “I've noticed that students really like to see examples of the concepts, in addition to the theory and general results.”
- “I am now a better manager of organizing activities/problem sets for students in my face-to-face courses based on whether the activities are more easily accomplished by students on their own time, or with face-to-face help from me.”

One particular comment within this category makes reference to the difficulty involved in accurately understanding how learning takes place from the student’s perspective: “This is more of challenge rather than a change I struggle with and that is how to make the invisible visible; to be able to get a sense for whether or not students are effectively connecting with the material they are learning.” Concern with making the invisible visible in terms of student learning surfaced in another dominant theme, that of assessment.
Assessment Strategies

Several comments were made regarding the assessment of student learning. One respondent commented that, “It changed the way that I assign grades for assignments and the course in my face to face classes.” Another instructor talked about using assessment to prepare face-to-face students for classroom sessions: “I use lots of online activities to make sure my face-to-face learning is as effective as possible. This includes online work to prepare students for the classroom, and online tools for assessing student learning.” Several assessment strategies were mentioned as having come about as a result of an instructor’s online teaching experience. These strategies included the use of rubrics, self-directed tutorial exercises, automated self-assessments, and graded discussion forums.

Re-use of Online Course Materials

A final major theme to emerge was the re-use of materials created for online courses. Unlike the other dominant themes – the social and communicative aspect of learning, the instructor’s conception of how students learn, and the increased focus on assessment – which depend, in large part, on the reflection and insights of the instructor, the re-use of online material for face-to-face classes is motivated mostly by the opportunities it affords. Instructors spent time and effort in creating videos, narrated PowerPoints, quizzes, and additional problem sets for use in their online classes. Many of them found benefit in re-using those materials for their face-to-face classes, as can be inferred from the following comments:

- “I modified some of my resident classes to utilize my recorded lectures in a flip format.”
• “I needed to create some textbook-independent problems for my online course, and I use most of the same problems for one of my resident courses.”

• “I created some Camtasia presentations (PowerPoint with voice added) for my online courses and also link them to ANGEL in my resident courses.”

**Negative Comments**

Although the great majority of comments were thoughtful and positive, a couple of respondents registered complaints about the time requirements and lack of recognition involved in preparing and teaching online courses. One instructor wrote, “It has not provided me opportunities for professional growth and significantly reduced time for reflection and research in my own field of study.” Another noted that, “For me it has vastly increased my planning and preparation time. There is no such thing as an informal exchange in class leading to an unplanned but richly productive off-topic session.” These are valid points reflecting concerns that have been identified in the literature on online teaching (e.g., Maguire, 2005; Shattuck, 2012).

**Interview Summaries**

Table 3 presents some demographic data about each of the eight interviewees. Each has been assigned an alias. Following the table are summaries reflecting the overall impressions I formed during the interviews. They describe areas of focus and concern that seemed to have particular resonance for each of the interviewees.
Table 3: Demographic data collected from interviewees

<table>
<thead>
<tr>
<th>Alias</th>
<th>Years Taught Online</th>
<th>Years Taught Face-to-Face</th>
<th>Program Area</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>6 to 10</td>
<td>More than 20</td>
<td>Public Administration</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Colin</td>
<td>1 to 5</td>
<td>6 to 10</td>
<td>Geographic Information Systems</td>
<td>Instructor</td>
</tr>
<tr>
<td>Emily</td>
<td>1 to 5</td>
<td>11 to 15</td>
<td>Software Engineering</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Frank</td>
<td>1 to 5</td>
<td>More than 20</td>
<td>Information Technology</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>George</td>
<td>11 to 15</td>
<td>More than 20</td>
<td>Education</td>
<td>Professor</td>
</tr>
<tr>
<td>John</td>
<td>1 to 5</td>
<td>11 to 15</td>
<td>Information Technology and Public Admin</td>
<td>Instructor</td>
</tr>
<tr>
<td>Miranda</td>
<td>1 to 5</td>
<td>11 to 15</td>
<td>Geology</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Peter</td>
<td>6 to 10</td>
<td>11 to 15</td>
<td>Geographic Information Systems</td>
<td>Professor</td>
</tr>
</tbody>
</table>

**Allen**

As a senior lecturer in Public Administration courses focusing on security, Allen’s teaching experience comprised 23 years of face-to-face teaching and eight years of online teaching. He reported relying a good deal on current issues as prompts for teaching and learning activities. To make content relevant to students, he often had them study real-time situations. Other activities in which his students engaged included reviewing political texts, role-playing in
policy discussions, and communicating with guest lecturers who were experts in their field of practice.

In the first interview, Allen did not speak in great detail about the impact online teaching had on his face-to-face teaching. His reflections and insights focused mostly on the differences between the two formats. During the second interview, however, he described several ways in which his online teaching experience had led him to reflect on his face-to-face teaching. These included becoming more organized in lesson planning and developing a new strategy for increasing participation in classroom discussion.

Colin

Colin taught courses in Geographic Information Systems. His introduction into online teaching came about when his department began offering one of his face-to-face courses as an online course.

Colin spoke quite a bit about the affective aspects of teaching. He was emphatic in stating his belief that students will not have a positive experience in either format “if there is not enough personal communication” with the instructor. When he began teaching online, he made a deliberate effort to personally connect with his online students. He believed that this established a better learning environment for the students and he stated that it made the teaching more enjoyable for him. After coming to these realizations, he began to be more deliberate in creating strong connections with his face-to-face students.

Another way in which teaching online influenced his face-to-face teaching was in his communication of course expectations to students. He believed that “expectation management in the online environment was critical” in order to prevent misunderstanding. Although he had no
complaints from face-to-face students, he began to be more explicit in communicating his expectations to them as well.

**Emily**

Emily has been teaching Information Technology courses face-to-face for 13 years and online for four years. She began teaching online when her department developed an online version of one of its programs. She had some concerns about putting her face-to-face course online because she had always taught it with a great deal of in-class group work and she knew she would have to teach the online version completely asynchronously. She reported, however, that she has managed to conduct effective group activities among her online students with minor modifications.

As with most university instructors, Emily had no formal preparation for face-to-face teaching although, when she began teaching online, she had the opportunity to work with an instructional designer. Emily is very reflective about her teaching and about her students’ learning. As a result of having to adapt her teaching to an online environment, she became very interested in learning theory and began actively seeking information about it to inform her teaching.

**Frank**

Frank taught face-to-face courses in Information Technology and Security for over 20 years. He began teaching online about five years ago. He believed it was very important to establish a personal connection with each student and he put a great deal of effort into making courses fun for students.
He has experimented with several different approaches to creating video lectures, finally settling for one in which he narrated over slides that made greater use of images than text. After having created this collection of lecture videos, he began using them to flip his face-to-face classes. He was so pleased with the flipped model that he began planning to create lecture videos for several of his face-to-face classes, even those that do not have an online counterpart.

He explained his reasons for flipping his classes in terms of student learning outcomes and student satisfaction. He said that the learning outcomes remained the same but student satisfaction increased “overwhelmingly.” For him, this was solid justification for using the flipped model.

George

George had a 40-year career teaching courses in Higher Education. As Professor Emeritus, he continued to teach several online courses every year. He became interested in online education around the time the World Campus was getting started. When he was presented with the opportunity to participate in the launch of a new certificate program, he advocated to create it as an online program.

When he started teaching online, he transferred many face-to-face strategies into his online courses. After teaching a couple of online courses, he came to believe that the online experience was actually a better learning experience for students because it reached all students more effectively. At that point, he began using strategies from his online classes in his face-to-face classes and making his face-to-face classes more blended.

George was the only instructor in this study who came from the discipline of Higher Education. As such, it should be kept in mind that his comments may occasionally reflect a greater sensitivity to issues of teaching and learning than those of the other interviewees.
John

John began teaching face-to-face courses in Information Technology and Public Administration between 11 and 15 years ago. His online teaching took place over the last five years. He had no formal training for teaching in either setting although he attended workshops and also received Penn State’s Certificate for Online Teaching.

He reported that he is comfortable with technology, being situated within the disciplines of computer and information sciences, and had moved his face-to-face classes to a blended model over time. He began minimizing the time he spent on lecture in the classroom and, instead, made more and more lecture material available to students in video podcasts. Although he spoke positively about online teaching, he mentioned more than once that he did not think the online format was as effective for undergraduates as it was for graduate students. For the most part, his online classes were taught to graduate students while his face-to-face classes were for undergraduates. Because of this differential, some of the strategies he had tried to transfer from the online environment into his face-to-face classes have not been as successful as he would have liked.

Miranda

Miranda taught Geoscience courses in a face-to-face format for about 10 years and in an online format for about five. She designed the curriculum for the online program and recruited other faculty to teach in it, working with instructional designers in the beginning. Her solid technical background contributed to her feeling of confidence in designing and teaching online courses.
As a scientist, she was very data-oriented. She remarked several times on the importance of having students work with real data in order to develop a robust appreciation of the processes involved in geoscience work. She was a scientific thinker and a reflective instructor, merging the two inclinations to identify and experiment with the most effective ways to help her students learn.

Miranda’s experience of making changes in her face-to-face classes as a result of teaching online focused on moving some of her content presentation activities out of the classroom and onto videos. This enabled her to use class time for advancing farther into the material and for engaging students in active learning.

**Peter**

Peter began teaching face-to-face Geographic Information Systems courses 11 years ago. A year after that, he developed and taught his first online course. For him, online teaching had been a part of his practice almost as long as face-to-face teaching had.

He was thoughtful about his teaching methods and had solid beliefs about what worked. He thought students needed multiple practice activities that allowed them to process material. He was very deliberate about assessment and appreciated the value of using it formatively. Over time, he incorporated many automatically-scored quizzes into his weekly lessons to ensure students had done the readings and that they understood them well enough to engage meaningfully in classroom discussion.

Like other interviewees, he had created content videos his students could watch outside of class. Like Frank, he believed his time was well-spent in creating these assets because they were so useful to students. He used online quizzes to make sure students had reviewed these materials before coming to class.
Thematic Analysis

A thorough thematic analysis, following the Braun and Clarke (2006) method, was begun shortly after the first few interviews were completed. It continued throughout the first and second round of interviews and resulted in the identification of six major themes encompassing qualitative data from both the interviews and the survey. After the second round of interviews, it became obvious that using the individual interviewee as the study’s unit of analysis was not providing an appropriate level of granularity for the thematic analysis. The unit of analysis was, therefore, reviewed and adjusted in order to advance the thematic analysis in a productive manner.

The Learning Episode as a Unit of Analysis

Guest, Namey, and Mitchell (2013) define a unit of analysis in a research study to be “the level of abstraction at which you look for variability” (p. 26). They go on to say that the unit of analysis in most social-behavioral research is the individual. It became clear to me during the interview phase of my research that most of the interviewees demonstrated multiple cases of change and learning resulting from their experiences of teaching online. In their study of higher education teacher learning, Van Eekelen, Boshuizen, and Vermunt (2005) used the term learning episode to indicate an individual instance of learning in which “an experience whereby knowledge, skills, [and] new attitudes related to work are acquired and recognized by the teachers themselves” (p. 448). Realizing that the use of an individual instructor as a unit of analysis was not appropriate for my study, I borrowed their term and focused instead on the learning episodes experienced by these instructors.
I noticed a similar pattern across all the interviews as instructors described how they came to make some kind of change in their face-to-face teaching. Each one of these learning episodes began with an issue, challenge, or problem the instructor wanted to solve. Discussing their reactions to these unsolved problems, instructors described making observations about their online classes, reflecting on those observations, forming insights, and finally making a decision to implement a new practice in their face-to-face teaching.

For example, Frank spoke about his use of between-class videos in order to make class time available for the kinds of activities he thought most important. For him, it was better to use class time to “communicate with” rather than lecture to his students. His response to this issue was to create lecture videos ahead of time that students could view outside of class. There were a number of observations and reflections on his part that contributed to his decision to implement this strategy. For instance, recording all his lectures as videos ahead of time for his online class made him think of doing the same thing for his face-to-face class. Another realization was that students could watch the videos multiple times if necessary. These observations and realizations combined with personal beliefs such as “Education is basically a communicative process.”

This learning episode began with the unsolved problem of Frank’s wanting more class time available for two-way communication with students. After recognizing the problem, he went through a series of observations and reflections about both his online and face-to-face classes and eventually decided to implement a strategy in his face-to-face teaching in which students would view lecture videos between class sessions. Using Frank’s experience as an example, Table 4 presents the components of a learning episode.
Problem/Challenge | Observations/Reflections | Potential Solution
--- | --- | ---
How to use valuable class time to communicate with rather than to lecture to students. | • All lecture videos for the online class were recorded ahead of time.  
• Videos for online class could be used for face-to-face class since the class is the same.  
• Videos allowed students to watch multiple times if they need to.  
• Face-to-face class time is better used in two-way communication rather than one-way lecturing.  
• Students appreciated having flexibility to view lectures when convenient.  
• Flipping the class produced the same learning results but students liked it better than the traditional approach. | Flip the classroom by creating pre-recorded lecture videos available to students.

Table 4: Example of learning episode

The outlining of learning episodes contributed much to clarifying the themes and building a thematic map. Thus, each pair of interview transcripts was analyzed for the purpose of extracting learning episodes. Each learning episode was composed of three elements: 1) an initial problem or challenge the instructor wished to address, 2) a set of observations and reflections relating to the problem or challenge, and 3) a resolution that was implemented as a potential solution. To qualify as learning episode, all three elements must have been present in the interview transcripts for each interviewee. Mentions of only one or two of elements did not
constitute learning episode. For example, Peter mentioned that one of the ways teaching online influenced his face-to-face teaching was that it had helped him to be more organized in his course planning but he did not offer any details about the observations or reflections that led him to this practice nor did he describe the ways in which being less organized had been a problem for his face-to-face teaching. Without such elaboration from him, I did not consider this a complete description of a learning episode.

Themes from the Learning Episodes

Twenty-two learning episodes were extracted from the experiences of the eight instructors. From the 22 episodes, six overarching themes emerged. Following Charmaz’s (2006) recommendation, I use gerunds rather than nouns to reflect the active, rather than static, nature of the themes:

- Reflecting on Practice occurred when instructors questioned themselves about their goals and objectives in teaching. Miranda, for example, described asking herself, when designing a learning activity for her students, “What is the point of this exercise?”

- Creating Structure encompassed course planning and designing.

- Promoting Active Learning was a common theme reflecting instructors’ ongoing consideration of how to move students to deeper levels of engagement with the course content.

- Encouraging Peer Interaction focused on creating situations in which students interacted with one another as well as with the course content. It seems to reflect a recognition of the social nature of learning.
• *Establishing a Connection* described instructors’ attempts to personalize themselves to students in an effort to address affective needs.

• *Conducting the Class* reflected instructors’ concern with making optimal use of class time.

Table 5 presents a tally of learning episodes extracted from each instructor’s transcripts and categorized according to theme category.

<table>
<thead>
<tr>
<th>Theme Category</th>
<th>Allen</th>
<th>Colin</th>
<th>Emily</th>
<th>Frank</th>
<th>George</th>
<th>John</th>
<th>Miranda</th>
<th>Peter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflecting on Practice</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Creating Structure</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Promoting Active Learning</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Encouraging Peer Interaction</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Establishing a Connection</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Conducting the Class</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Learning episodes according to interviewee and theme category

The most commonly occurring theme was Conducting the Class, signifying the emphasis instructors attached to the only structured time during the week when they were face-to-face with
the students. Six of the eight instructors described at least one complete learning episode focused on how to make the best use of this valuable time in contact with students. While the conduct of the class is clearly an important concern among the instructors in this study, it is also likely that instructors’ attention would quickly turn to the classroom setting in any conversation of face-to-face teaching simply because the classroom is so closely associated with teaching in that modality.

The second most common theme was Promoting Active Learning, indicating instructors’ concern with expanding opportunities for students to engage meaningfully with course content. After all, a primary goal for the instructor in any teaching endeavor is to facilitate students’ mastery of target skills and knowledge. Thus, instructors spoke frequently about ensuring that students were grounded in foundational concepts, conducting formative assessments to check progress, and providing multiple occasions for practice and feedback.

Related to Promoting Active Learning were the themes of Encouraging Peer Interaction and Establishing a Connection. These themes encompassed instructors’ attempts to address the social and affective aspects of learning, important cornerstones of constructivist theories of learning. Although neither theme surfaced as frequently as the theme of Promoting Active Learning, both are related to student interaction with the activity of the course and reflect instructors’ concerns with student motivation and degree of engagement.

The least frequently mentioned themes were those of Reflecting on Practice and Creating Structure. Of the six themes, these two describe perhaps the most solitary processes involved in teaching, representing activities in which instructors work on their own, away from the settings in which they interact with students. Although these two themes exerted important influence on decisions about how a course was organized, designed, and taught, the enactment of the processes involved in these themes did not entail the instructor’s interaction with and among students.
The following sections describe the 22 learning episodes in the context of the emergent theme to which they are related. Where appropriate, comments from the open-ended survey questions are also included.

Reflecting on Practice

Several interviewees mentioned reflecting on aspects of their practice as a result of moving their face-to-face courses to an online environment. For example, John’s experience of teaching online led him to think about the kinds of material that could be effectively learned “electronically” in his face-to-face classes. George described how, when he first began teaching online, he realized that students had to thoroughly complete the readings before they could successfully participate in the online discussion. That led him to reflect “on the fact that that wasn't really happening in the face-to-face course.” Although similar comments were made by other instructors, none were as striking or detailed as the descriptions offered by Miranda and Emily of reflecting on the very premises of their teaching practice.

In the context of Miranda’s learning episode within this theme, she described the initial challenge/problem this way: “What happens to a lot of people in face-to-face teaching is that it's a well-worn path and traditional so you don't take the time to question how you're doing it, whereas in online teaching, since you have to think about how you're going to do it, it does force you to examine the point of whatever you're teaching and how and what you're going to do to get to that point.” When she began teaching online, she realized that there were some activities from her face-to-face class that she would have to modify for her online class, e.g., having students examine rocks with lab equipment. Because she was not able to carry out certain activities, she began to really think about her learning objectives in a way that she would not have done if she had not been “forced to figure out a different way” to achieve the objective. To avoid being
overly reliant on the “well-worn path,” Miranda has cultivated a reflective approach to her teaching. In her words, “Now that I’ve taught online, when I go back to my face-to-face classes, I do think about in the back of my head, ‘Why are we doing this lab? Is it just because we've always done it this way?’”

Emily’s experience of this phenomenon was quite similar. For her, the initial issue was how to continually improve her effectiveness as a teacher. Teaching online for the first time caused her to reflect deeply on why she used particular strategies in the classroom. She felt that she needed to understand how people learn “in order to do a good job” as a teacher. As she said, “If I want to be an effective teacher, there's the teaching side of it, but then, how do people learn? Prior to [teaching online], I just never really gave it a thought.” Her reflections on how people learn led her to begin reading research about learning theory. Today, she regularly seeks out information about effective teaching in order to experiment with strategies in the classroom. Teaching online, in her words, “…increased my understanding of teaching in general, and I've become more open to trying even more things.”

George also made comments about the role of reflection in his early online teaching experiences. As he said of one of his courses, “I had to really think through how a student was going to experience it and how it was going to contribute to the student's knowledge and understanding.”

As mentioned in the literature review, reflection plays an important role in the development of teaching expertise. The examples described in this section indicate an engagement in one of Mezirow’s (1991) three types of reflection:

1. Content reflection asks “What am I doing?”
2. Process reflection asks “How do I do it?”
3. Premise reflection asks “Why do I do it?”
Miranda’s and Emily’s learning episodes suggested an engagement in all three levels of reflection. Each of them began by reflecting on both the content and process of their current teaching practices. This led them to question the premises on which their assumptions were based, resulting in further reflection about alternative processes for achieving their goals.

Creating Structure

A commonly mentioned theme among the interviewees was that teaching online had, in some way, led to a change in the way they planned and organized their face-to-face classes. Both Colin and John, for example, spoke about the importance of setting student expectations. For Colin, “Expectation management in the online environment was critical because people would get really agitated and frustrated if they didn't know what I was looking for.” Even though his face-to-face students did not complain as vocally about this as some of his online students, Colin believed it would be beneficial for the face-to-face students to have clearer written instructions and rubrics.

John’s experience was a little different. In his words, “I was having a lot of [face-to-face] students coming in who, all too late, would say ‘I didn't really know I was going to have to do this.’ Now, I thought I was being very explicit about things. Then, after some reflection, I thought ‘What can I do better?’ Then I started doing the online courses and that really helped give me some ideas.” John worked with an instructional designer on course development when he began teaching online who made suggestions on how to structure his syllabus and built a course Web site that provided an example of how to organize online folders and menu items for effective navigability. For both John and Colin, the impetus for these changes was the need to provide explicit instructions to students in the online environment who did not have the benefit of being in
a face-to-face classroom with the instructor where misunderstandings might have a better chance to be addressed.

Although Peter did not provide enough detail to qualify as a learning episode, he did say that the primary overall impact that teaching online has had on his face-to-face teaching was being organized. For him, teaching online “forces you to be organized, and then, once you realize what you can do with a well-organized class, it's just hard to go back.”

Several responses made to the open-ended questions of the survey spoke to both the themes of creating structure and reflecting on practice. For example, one instructor commented on “the importance of developing clear objectives” while another mentioned becoming “focused more on learning outcomes and competencies.”

**Promoting Active Learning**

Chickering and Gamson (1987), in their often-cited work on effective practices for undergraduate education, described active learning as any kind of activity that promotes deep levels of engagement between a learner and the material to be learned. For students, activities that promote active learning include making connections between course material and their personal lives, discussing course content within a peer group, or working with newly learned material at multiple levels of Bloom’s (1956) Taxonomy. Bigatel, Ragan, Kennan, May, and Redmond (2012) remark that, “[a]lthough there is not yet a universal definition for active learning, it is in alignment with a movement from lecture-based teaching toward the active engagement of the learner.”

Five of the 22 learning episodes focused on issues of active learning. In one example, Emily realized that many of her face-to-face students were coming to class without completing the reading assignments. Because she had created online quizzes for her online classes, she was
familiar with the online quiz tool and the purposes for which it could be used. This led her to experiment with requiring her face-to-face students to complete online quizzes about the readings before they came to class. An added bonus was the information provided in the learning management system’s grade book about the kinds of questions the students were misunderstanding.

Peter’s interviews revealed the use of a similar strategy, though the initial problem and eventual outcome was slightly different than Emily’s. As he described it, when he first began teaching, “it seemed very easy to go in and do the teach part,” i.e. the lecture. He realized that knowing how well students were understanding the material was more difficult but very important. He also believed it was important for them to actively engage with the material as they were learning it. Even though he relied, to some degree, on body language and eye contact to understand the extent to which students were following the lecture, he could not be sure everyone was getting it. He began to notice that students were not doing as well on the tests as he thought they should be doing. When he first started face-to-face teaching, he did not know there were tools available to conduct online quizzes. After becoming familiar with them through his online teaching, he began using them during class sessions as a way of collecting immediate data about students’ understanding of his lectures.

To incorporate online quizzes into his class sessions, he would break his class lectures into short chunks, about 15 minutes long. Students used their laptops to take short, focused online quizzes after each lecture chunk. Peter could review the results quickly in class on his own computer to understand which, if any, points of the lecture had been misunderstood. In addition to the instant feedback the quizzes yielded, he found the recorded data points from these “low hurdle assessments” useful when it came to grading students. As he said, “Once I had the other quizzes online, I realized how useful they were and then I started doing them with my face-to-face classes as well.” For Peter, one of the influences teaching online had on his face-to-face teaching was in
underscoring the importance of employing “a more rigorous teaching strategy of prepare-teach-assess.”

In George’s learning episode related to active learning, he experienced both a concern about the extent to which students had completed the reading assignments and a desire to increase class participation. When he began teaching online, he described being immediately “hooked” because of the potential he saw for his face-to-face classes. As he said, “Once I got a couple courses under my belt, I realized the online experience was actually more intensive both for the student and for the faculty member and was a more thorough learning experience and a more reliable learning experience.” He believed it was easier in a face-to-face setting for a student to “hide” than in an online class because, in his face-to-face classroom, he “didn't actually force students to participate” whereas, in the online course, every student had to respond to discussion board questions based on the readings. “So,” he said, “then I went back to the classroom and got much more into blended instruction where they had to do some online exercises each week in addition to showing up in class for the three hours.”

To move toward a more blended model in his face-to-face classes, he began posting more materials online and requiring students to read and react to them on the discussion board. Speaking of the online environment, he said, “There is no way the student can do each week’s posting unless they've done the readings first.” An additional benefit of using this method was that posting to the discussion board provided students with an opportunity to “think and write more clearly.” Moreover, using the discussion board between class sessions extended the time allowed during class for discussing and engaging with the material and one another. A final advantage provided by this strategy was that George could conduct the classroom discussion as he liked without cold-calling on students and still be confident that everyone had a chance to participate in some kind of discussion about the material.
Peter also used the discussion board to promote active learning. Peter believed that it was important for students to make connections between course content and everyday life, to relate the material to its practical consequences, especially when they saw how it affected them personally. He believed that it gave them an opportunity to process the material more deeply and also aided in their retention of the content. For Peter, an activity that enabled this kind of connection-making was open discussion, both face-to-face and online. Class sessions did not always permit enough discussion time and some students might have been shy about contributing to class discussion. Although Peter believed that classes were “very social places,” he said, “they also can be very cliquish places. Sometimes people take these classes with their best friend, and the two of them sit there, and they're the ones talking to each other during the breaks and never to anyone else in the class.” Conducting between-class online discussion took advantage of the fact that some people were “more willing to talk to each other online than in the classroom.”

For these between-class online discussions, he asked questions that did not have a right or wrong answer. For example, he asked students how they thought they would be affected if their county’s groundwater were no longer drinkable. He learned things about his students from the way they answered a question like this. He said, “I think it reveals a lot about people's background, and the differences in their background, and what they're interested in. They might not remember pressure gradients associated with groundwater a couple of years after taking this class, but they might remember more of what issues were important to them.” Having a record of their answers to such questions also gave him the opportunity to weave individual student comments into his lecture in upcoming class sessions.

Allen also used discussion to promote active learning but, rather than using online discussion between class sessions, like George and Peter did to achieve this goal, he developed a different strategy. After teaching online, he realized that it was possible, in that environment, to compel everyone to make a contribution to the discussion board. In the face-to-face classroom, on
the other hand, students could abstain from participating. Although cold-calling was an option, Allen was not comfortable raising the tension level in the classroom by using that strategy. One difference he noticed between discussion in the classroom and discussion online was that students had time to think and reflect before posting online. This led him to implement a strategy in which he posed a question to his face-to-face class and told them he would call on somebody in five minutes to answer the question. He said, “The students appreciate they have some time…Their level of participation and cooperation, seems to be quite a bit higher that way.” He believed that this technique “helps to maximize the learning experience and minimize the uneasiness and those aspects of learning that often turn students off, make them less interested in learning.”

Several responses from the survey echoed the themes exemplified by these learning episodes. One instructor wrote, “I use many self-directed tutorial exercises and automated self-assessment tools for the students in my face-to-face sections.” Others mentioned introducing “more active learning opportunities” and “providing opportunities for more application.”

**Encouraging Peer Interaction**

Several learning episodes were described in the previous section in which instructors used discussion, whether online or face-to-face, as a means of moving students toward deeper levels of engagement with course material. In those examples, the instructor’s primary concern was the engagement with content. There are also several learning episodes in which instructors described using discussion to provide a space for students to interact with one another. Although no one used the term *social learning*, it was implied that, in these episodes, the peer-to-peer interaction, rather than interaction with course content, was the primary purpose because of the benefit it provided to students’ learning. With roots in the writings of Vygotsky (1978) and
Dewey (1938), social learning is an important element of constructivism (Driscoll, 2000) and such contemporary theories of learning as Wenger’s (2006) Communities of Practice framework.

Although John taught graduate courses online, several of his face-to-face courses were undergraduate courses. Echoing Peter’s comment that some students may have been hesitant to participate in an in-class discussion, John speculated that some of his face-to-face undergraduate students may need prompting to contribute to class discussion. As he said, “With face-to-face classes, they can interact in class, but a lot of them are young, a lot of them are hesitant to open their mouths in class and provide their opinions. But some of them may feel more willing…to voice their opinions electronically or in an asynchronous environment rather than in class.” To address this issue, he created between-class discussion boards using questions that promote interaction, “trying to get them to explore so that not necessarily everyone's going to have the same answer.”

John described another learning episode in which teaching online had led to a changed face-to-face teaching practice in the area of peer interaction. At the beginning of the semester, students were assigned a large team project. One of their first activities on the project was to collaboratively create a team contract. In his words, “In the past, what I've done with the face-to-face class is give them some time in class to talk about this and work it out…What I do now is I give them a small amount of time to sort of introduce themselves, exchange some contact information, things like that, but I provide them a discussion forum by which they can sort of go back and forth about what they want in this contract…how they're going to handle such things as copyright and plagiarism issues, how they're going to handle communication, how they're going to handle who's the leader.” Explaining his reason for employing this strategy, he said, “The idea was, what I would often see when they do it in class is one person usually take control, and say ‘Listen to this’ and a bunch of other heads just nodding, not a real discussion, so the idea was, well let's see if they're a little more actively taking part in this if we do it electronically.”
Another instructor who used online discussion as a between-class activity was George, to whom the exchange of ideas among students was also important. He explained that, by discussing course concepts online during the week, students were given a chance to raise questions and “go back and forth on these issues” in a way that they might not have if the discussion were limited to classroom time.

Emily also had a peer interaction challenge. Hers involved a classroom activity. She had always carried out a peer review activity in her face-to-face class in which students showed their work on a whiteboard or flip chart and classmates made comments while she informally monitored. Of course, when she implemented the activity online, she could no longer informally monitor it so she developed a rubric to guide students in their review work and also graded them on their review to encourage them to take the assignment seriously. She found that the more formalized structure resulted in more substantive comments and insights, not only because of the guidance provided by the rubric but also because of the enhanced motivation supplied by the grade. Reflecting on the phenomenon, she decided to conduct the activity in her face-to-face class in the same way.

Several instructors mentioned peer interaction and group work in response to the qualitative survey questions. For example, one respondent wrote that teaching online “has fundamentally changed the ways that I think about student interaction.” That same instructor also wrote, “Learning to manage group dynamics effectively online has made me re-think ways to manage classroom dynamics and to encourage students to take more of a lead throughout the courses I teach.”
Establishing a Connection

Another of Chickering and Gamson’s (1987) best practices for undergraduate education is the promotion of student-faculty communication, both in and out of class. Three of the 22 learning episodes exemplify instructors’ concerns with this issue. Colin, for example, believed that the learning was better for students when the instructor established a connection with them. When he began teaching online, he was especially concerned with this because, as he said, “It's easier for a student to just feel isolated like they're online out there on the Internet and there's no one else out there to talk to.” As a consequence, he felt that it was important “to work hard and actively reach out to students and try and engage them and make them feel connected.” He used email to establish and maintain regular contact with his online students. After implementing this practice, he began to reflect on his face-to-face classes and came to the conclusion that “It's really no different for regular classroom students, too. They want to feel connected and part of it.” After that, he began to make a concerted effort to reach out to his face-to-face students by talking with them before and after class, asking how they were doing, and making one-on-one small talk in labs. He found that this resulted in a more enjoyable experience for him. He said, “As I watched how students were interacting, I noticed that there were a lot of people that I just never heard from. I took it upon myself to then reach out. After I did reach out, that's when I saw them start to engage a lot more. I thought, ‘Oh, well, this is much better.’”

A challenge for John in this category was how to motivate weaker students to seek help outside of class. Because he had become familiar with the use of online office hours in his online class, he decided to set up online office hours for his face-to-face class, reasoning that this method might provide students with a quick way of contacting him while they were at work on an assignment. Unfortunately, this was one of the very few strategies mentioned by an instructor that
did not work out as intended. None of the students took advantage of the online office hours and he discontinued the practice after one semester.

Another of John’s efforts to establish a connection with students did have a positive outcome. He had used private blogs in his online class to have students reflect on their learning - “what they're excited about, what they're having trouble with, where they feel they are, their confidence level, things like that.” At the same time he was using the blogs in his online class, he was also looking for a way, in his face-to-face classes, “to get a richer set of information” from some of the students who might have been hesitant to “raise their hand and say ‘I don't get this.’” He began implementing this strategy as a very low-stakes assessment, assigning just enough points to motivate students to complete it. He believed that it was helpful to the students, especially those who used it as an opportunity to reflect meaningfully on their learning.

**Conducting the Class**

As might be expected, many of the learning episodes reflected instructors’ focus on conducting the actual class sessions, maximizing valuable face-to-face time with students.

Several instructors described learning episodes in which they made lecture videos available for students to view outside of class so that more class time would be available for communication between the students and instructor.

Frank’s case is a good example. He taught several of his classes in both a face-to-face and online format. For his online classes, he video-recorded all of his lectures before the start of the semester. After creating video lectures for each of his online classes, he decided to make the lectures available to students in the face-to-face versions of those classes. He said, “What I like is it eliminates most of the one-to-many communication by offloading that to a time that the student can pick according to their own schedule and their own convenience. It allows me to dedicate the
class time we do have more to discussion and sharing both ways, rather than one-way lecturing.”

Frank viewed this as “flipping” the classroom, i.e., using multi-media to introduce new lecture material between class sessions so that class time could be used for hands-on activities with coaching from the instructor. This approach aligned with Frank’s belief that “education is basically a communicative process.” He said that it gave him the freedom during class sessions “to spend the time engaging with the students which I think is the most important thing.” For a face-to-face class that meets twice a week, he conducted one session in the classroom and one in a computer lab. In the lab session, students worked on their assignments with Frank available to help them troubleshoot. Comparing the flipped model to the traditional model, he said he saw the same learning outcomes on the quizzes and projects. Student satisfaction, however, was “overwhelmingly” higher with the flipped model. He was so pleased with the approach that he began planning to flip all his face-to-face classes, even those that do not have an online counterpart.

Classroom flipping was also mentioned in the qualitative survey data. For example, in answer to the question about a face-to-face teaching strategy that had been planned or implemented as a result of teaching online, one instructor wrote, “I modified some of my resident classes to utilize my recorded lectures in a ‘flip’ format.” Another wrote, “I have converted many of my resident classes to flip methodology – with lectures pre-recorded.”

John’s experience of teaching online led him to think about the kinds of material that could be effectively learned “electronically,” i.e., presented online as a video or animation, as opposed to the kinds of activities for which the classroom is well-suited. Over time, he moved to a more flipped model of teaching, with lecture material online and class time used for interactive problem solving and discussion. He began minimizing the time he spent on lecture in the classroom and, instead, made more and more lecture material available to students in a video format. For his database class, rather than lecturing for 50 minutes, he would speak for five to 10
minutes and use the rest of the class time for team-based activities like developing a diagram for an SQL database. This allowed him to observe how individual students solved these problems and thus monitor their performance, intervening when necessary to correct and redirect. It also allowed him to see how well they worked in teams and provide coaching where necessary. Finally, it provided him with insights into the way students worked on these tasks and the kinds of problems they had in doing so. He believed this kind of ungraded group activity may encourage quieter students to ask questions and seek help. He employed a similar strategy with a programming course he taught, using class time for students to work in teams to solve small problems. One of his goals for this class was to have students review and critique one another’s work because he believed that students were powerfully influenced by their peers’ assessments. He also thought activities like this promoted greater independence, perhaps helping students to become better self-directed learners. His aim, in both these classes, was to “use the class time more effectively to do active learning style projects.”

Talking about her use of class time, Miranda said, “I realize that what students need help doing is sitting and working out the bugs in their programs.” After teaching online, she began to recognize some activities as “time wasters” during class sessions. As she said, “I've figured out how to change up some of my face-to-face classes so that a lot of the work that doesn't need to be done synchronously isn't done synchronously anymore. That's been fun.” One strategy that she transferred from her online classes to her face-to-face teaching was creating short “screencasts” showing how she would work out a particular programming problem. For her online classes, she created these as feedback to students on the programs they wrote. One of the most effective things about the screencasts was that students could play them repeatedly when they were trying to apply the technique to another program. She found that she could use these short videos from one semester to the next because students tended to have the same kinds of problems across semesters. Having these resources available to students outside of class allowed her to use class
time for group work which was productive since it overcame the logistical issues students faced in scheduling meeting time outside of class. She thought the screencasts were also very helpful for students who were “shy” about asking questions in class.

When Peter began teaching online, he created narrated PowerPoints to function as his lectures to the online students. He had always thought that the best use of class time was for him to thoroughly explain aspects of the course content with which he knew students often had difficulty. Once he became familiar with the process of creating narrated lectures for his online classes, he began doing so for his face-to-face classes as well. He said, “What needs to get done in the classroom still gets done in the classroom and other things happen online.” The lectures he made available to students for viewing on their own cover two types of content: 1) prerequisite material students needed to fully appreciate the classroom lecture and 2) supplementary information he thought would help them develop a more complete understanding or promote critical thinking about a topic. For most of these between-class lectures, he required students to complete low-stakes quizzes after viewing.

George used video lectures to provide remedial instruction to his face-to-face students. For example, he created a writing tutorial for his online students. When he realized that his face-to-face students could benefit from it as well, he made it available for them. He said, “Rather than wait until the end of the semester when they submit their big final report or term paper and criticizing it then, I was doing more to bring them up to speed in advance.” For his online and face-to-face classes that required a statistics background, he also created “some statistics tutorials off on the side for those who need them.”

Similar to the way that online teaching had influenced instructors’ planning and organizing an entire course before teaching, several interviewees mentioned being more organized and prepared for individual class sessions. Allen said, “Online has caused me to be much more structured, much more disciplined in the way that I conduct a residential class.” For
instance, he began sharing learning objectives with his face-to-face students at the start of each class session. He believed his class sessions had become “tighter” as a result of his online teaching experience. “Teaching online,” he said, “has helped me not to waste time.”

Miranda, too, believed that teaching online has led to her be more planful and well-prepared for individual class sessions. She said, “Most of my exercises and problem sets involve real data as much as possible. With a face-to-face class, I used to be a little lazy and know that I could find the right dataset on the fly or just give the students a link and some directions without ever really working through it myself to make sure that it was a dataset that really worked…In an online class you don't have the luxury of standing there in the room and trying different things in case the first thing you told them to do didn't work like you expected. You really have to make sure ahead of time with an online class. And in the end, that is better with a face-to-face class, too, so, once I got in the habit of having to do it, now I do it all the time.”

Chapter Summary

This chapter reported on the findings from both the survey and interview phases of the project. The survey was sent to 310 instructors and completed by 25% of them. Of those who taught both face-to-face and online, most had been teaching online less than five years. About a third of them had taught face-to-face over 20 years. The most frequently mentioned disciplines in the survey were Business/Management and Education. Four preliminary themes were identified from the qualitative survey data: 1) the social and communicative aspects of learning, 2) student learning processes, 3) assessment strategies, and 4) opportunistic re-use of online course materials.

Eight instructors participated in the interview phase of the study. Among them, seven had more than 11 years of face-to-face teaching experience. More than half had fewer than five years
of online experience. Disciplines represented included information systems and technology, education, public administration, and geology. Short summaries of each instructor’s particular areas of concern and focus were provided.

Each pair of interviews yielded one or more learning episodes consisting of an initial problem or challenge, a set of observations and reflections, and a strategy implemented by the instructor as a response to the initial challenge. A thematic analysis of the 22 learning episodes yielded six theme categories:

1. Reflecting on Practice
2. Creating Structure
3. Promoting Active Learning
4. Encouraging Peer Interaction
5. Establishing a Connection
6. Conducting the Class
Chapter 5

Discussion

This chapter makes explicit connections between the findings of this study and theoretical frameworks described in the literature, proposes a model of the relationship among the theme categories, and identifies some meta-themes with bearing on the proposed model.

Theoretical Connections

As mentioned in the previous chapter, the delineation of the learning episodes contributed much to the articulation of themes. After working intensively with the 22 learning episodes during the analysis phase, I began to see a connection between the structure of the learning episodes and Kolb’s (1984) experiential learning cycle. By the time I had identified the six themes described in the previous chapter, I had also begun to discern the contours of a possible model of the thematic relationships. Comparing Moore’s (1989) three types of interaction and the four zones of instructor thinking proposed by McAlpine et al. (2006) to the six themes helped a great deal to clarify the relationships. In this section, I relate the structure of the learning episodes to the experiential learning cycle and demonstrate the ways in which the previously described themes can be connected to the theories of Moore (1989) and McAlpine et al. (2006).

The Learning Episode as Experiential Learning

Each of the learning episodes can be represented as a manifestation of Kolb’s (1984) experiential learning cycle described in Chapter 2 and replicated in Figure 8 (Kolb & Kolb, 2009). Recall that the cycle is composed of four phases: 1) concrete experience, 2) reflective
observation, 3) abstract conceptualization, and 4) active experimentation. Phases 1 and 4 are enactment phases, i.e., the learner is “in the moment” of the experience. Phases 2 and 3 are reflection phases, i.e., the learner reflects on the activities that have occurred in the other phases.

In this section, several of the learning episodes are presented as examples of the experiential learning cycle. In some of them, the reflection phases are magnified with reference to theories of reflective learning and learning transfer.

![Experiential Learning Cycle](image)

**Figure 8: Experiential learning cycle**

A good example with which to start is Allen’s case of Promoting Active Learning. In this learning episode, Allen wanted to increase participation in his face-to-face class discussions. Allen believed, for both face-to-face and online learning environments, that it was important to students’ learning for them to participate in discussion, to “take a stand.” After he began to teach online, he realized that, while he was able to compel participation from all students in his online class, he had not been able to do so in his face-to-face class. He recognized that, in the online class, students had more time to think about and articulate an answer. Based on this observation,
he reflected that perhaps having more time to craft a response would make the exercise “non-threatening” to the students. His solution was to pose a question to the class, tell students they would have five minutes to form an answer, and then call on someone at the end of five minutes. He discovered that they appreciated having time to prepare. Table 6 shows the process in relation to the four phases of the experiential learning cycle.

**Table 6: Phases of the experiential learning cycle in Allen’s episode of Promoting Active Learning**

<table>
<thead>
<tr>
<th>Instructor: Allen</th>
<th>Theme category: Promoting Active Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete experience</td>
<td>In Allen’s online class, discussion board activities required all students to post a response to a prompt.</td>
</tr>
<tr>
<td>Reflective observation</td>
<td>Not everyone contributed to the discussion in the face-to-face classroom. In the online environment, everyone was forced to contribute. One of the differences between the face-to-face and the online settings was that, in the online environment, students had more time to think before making a response.</td>
</tr>
<tr>
<td>Abstract conceptualization</td>
<td>When students did not feel panicked or threatened, the learning was enhanced.</td>
</tr>
<tr>
<td>Active experimentation</td>
<td>He posed a question to the class and told students he would call on someone in five minutes, giving them time to think of an answer.</td>
</tr>
</tbody>
</table>

Another example of alignment between a learning episode and the phases of the experiential learning cycle is Colin’s episode of Establishing a Connection. Like Allen, Colin also wished to increase class participation, both in class discussion and in question and answer
sessions. Just as Allen held a firm prior belief that asserting a position on an issue was important to students’ learning, Colin believed strongly that students learn better when the instructor establishes a personal connection with them. In his reflections about teaching online, he realized that he had made a very deliberate effort to connect with his online students. He wondered if he should be more deliberate in making such connections with his face-to-face students as a way to enhance the learning experience for them. He began to implement strategies to do so and found not only that it created a more participatory atmosphere for the students but also that it made the experience more enjoyable for him. His example is shown in Table 7.

<table>
<thead>
<tr>
<th>Instructor: Colin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme category: Establishing a Connection</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concrete experience</th>
<th>Colin believed it was important to make a personal connection with students. Because he was not able to see his online students, he made a deliberate effort to connect with them.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective observation</td>
<td>He noticed that there were some people in his face-to-face class who did not participate.</td>
</tr>
<tr>
<td>Abstract conceptualization</td>
<td>He thought he might influence their participation if he made an effort to develop a connection with them.</td>
</tr>
<tr>
<td>Active experimentation</td>
<td>He employed several deliberate strategies, such as chatting informally during labs, to connect with his face-to-face students.</td>
</tr>
</tbody>
</table>

Table 7: Phases of the experiential learning cycle in Colin’s episode of Establishing a Connection

Using Mezirow’s (1991) levels of reflection and Kreber and Cranton’s (2000) domains of teaching knowledge, a magnifying lens can be applied to the reflective observation phase of the learning episode. Recall Mezirow’s (1991) three levels of reflection:
1. Content reflection asks “What am I doing?”
2. Process reflection asks “How do I do it?”
3. Premise reflection asks “Why do I do it?”

Kreber and Cranton (2000) posited three domains of teaching knowledge:
1. Instructional knowledge focuses on teaching strategies.
2. Pedagogical knowledge entails understanding how students learn.
3. Curricular knowledge is concerned with the context in which teaching occurs and the core assumptions instructors make about effective teaching.

The alignment between Mezirow’s levels of reflection and Kreber and Cranton’s domains of teaching knowledge is shown in Table 8.

<table>
<thead>
<tr>
<th>Mezirow’s levels of reflection</th>
<th>Kreber and Cranton’s domains of teaching knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content reflection</td>
<td>Instructional knowledge</td>
</tr>
<tr>
<td>Process reflection</td>
<td>Pedagogical knowledge</td>
</tr>
<tr>
<td>Premise reflection</td>
<td>Curricular knowledge</td>
</tr>
</tbody>
</table>

Table 8: Alignment between Mezirow’s (1991) levels of reflection and Kreber and Cranton’s (2000) domains of teaching knowledge

Allen’s and Colin’s learning episodes provide examples of how Mezirow’s levels of reflection and Kreber and Cranton’s domains of teaching knowledge operate in the reflection phases of a learning episode. In both cases, the experiential learner engages in Mezirow’s levels of content and process reflection or, using Kreber and Cranton’s terminology, the teaching domains of instructional and pedagogical knowledge. In other words, both of these learning episodes demonstrate examples of the instructor reflecting on how students learn (Mezirow’s process reflection, Kreber and Cranton’s pedagogical knowledge) and implementing teaching
strategies to enhance the learning (Mezirow’s content reflection, Kreber and Cranton’s instructional knowledge). In Allen’s case, he reflected on the process in which online students were given time to compose an answer to a question. He then implemented a strategy in his face-to-face class to accommodate that process. In Colin’s case, he reflected on the purposeful attempts he had made in his online class to personally connect with his students driven by his belief that students need a connection with the instructor in order to promote better learning. As a result, he implemented strategies in his face-to-face classroom to facilitate that process.

Miranda’s episode of Reflecting on Practice demonstrates a slightly different kind of reflection than what was seen in Allen and Colin’s examples. In this episode, when Miranda began teaching online, she had to think of some new teaching strategies for particular aspects of her courses simply because the traditional face-to-face methods were not available to her, e.g., having students handle different kinds of rocks in order to identify defining characteristics. This led her to engage in what Mezirow called premise reflection (Kreber and Cranton’s curricular knowledge). As she said, “If you are forced to figure out a different way around it, then you are asking yourself, ‘What is the objective here?’” She believed that, if she had not been “forced to figure out a different way” of structuring particular lessons, she would not have thought about questioning her premises. Having engaged in that type of critical reflection for her online class prompted her to begin doing the same thing for her face-to-face classes. Her learning episode is outlined in Table 9.

In addition to demonstrating alignment with phases of the experiential learning cycle, the examples of Allen, Colin, and Miranda have also shown how Mezirow’s (1991) levels of reflection and Kreber and Cranton’s (2000) domains of teaching operate in the reflective observation phases of the cycle. Learning transfer theory also plays a role by focusing attention on the abstract conceptualization phase of the cycle. As explained in Chapter 2, Salomon and Perkins (1989) distinguished between two mechanisms of transfer, low-road and high-road
transfer. Low-road transfer occurs when the context in which a skill is learned is very similar to a new context. The affordance of the new context facilitates the transfer. Low-road transfer relies quite a bit on repeated practice in a variety of similar, but slightly different, contexts. High-road transfer, on the other hand, requires deliberate reflection and the formation of an abstract conceptualization that relates the original context to the new context.

<table>
<thead>
<tr>
<th>Instructor: Miranda</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme category: Reflecting on Practice</strong></td>
</tr>
<tr>
<td>Concrete experience</td>
</tr>
<tr>
<td>Reflective observation</td>
</tr>
<tr>
<td>Abstract conceptualization</td>
</tr>
<tr>
<td>Active experimentation</td>
</tr>
</tbody>
</table>

Table 9: Phases of the experiential learning cycle in Miranda’s episode of Reflecting on Practice

The three learning episodes described above all demonstrate examples of high-road transfer. In Allen’s case, he realized that his online students had time to reflect on a question before answering. Applying this observation to his face-to-face class, he generalized that having
time to formulate an answer might be helpful to students in the classroom. For Colin, establishing a personal connection with students was an important factor in their learning and in his teaching. He made a deliberate effort to do this in his online class because he knew he would never see his online students. Before teaching online, he had taken for granted that a connection between himself and his face-to-face students would naturally develop. After he had implemented a few strategies to establish this kind of connection online, he began to wonder whether he should be more deliberate about this in his face-to-face class. Finally, in Miranda’s case, she discovered that several of the activities she usually conducted in her face-to-face classes were not possible to carry out in the online environment. She found herself in the position of critically reflecting on her learning objectives in order to rethink how she would achieve them. Having experienced the benefits of this activity in her online class, she came to realize that there were some aspects of her face-to-face teaching on which she did not reflect very deeply. She began to think that focusing some reflective effort on these aspects of her face-to-face practice could also yield benefits.

While these learning episodes provide examples of high-road transfer in the third phase of the experiential learning cycle, other episodes from the data set incline more towards low-road transfer in that phase. For example, after Emily began teaching online, she became comfortable using the quiz tool in her learning management system to conduct low-stakes, self-check quizzes to reinforce concepts from the assigned readings and lectures. When she realized that many of her face-to-face students were not completing the assigned readings, her familiarity with the quiz tool led her to implement the same method in her face-to-face class. In this case, the third phase is not so much an abstract conceptualization as it is a contextual affordance. Emily’s example is illustrated in Table 10.
Instructor: Emily

Theme category: Promoting Active Learning

<table>
<thead>
<tr>
<th>Concrete experience</th>
<th>Emily used online quizzes as learning checks in her online class.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective observation</td>
<td>She realized that many of her face-to-face students were not doing the assigned readings.</td>
</tr>
<tr>
<td>Contextual affordance</td>
<td>She had created online quizzes for her online classes. Doing so enabled her to become familiar with the quiz tool in her learning management system. Because of her experience with the tool, she began using it in her face-to-face class.</td>
</tr>
<tr>
<td>Active experimentation</td>
<td>She began conducting online self-check quizzes between class sessions.</td>
</tr>
</tbody>
</table>

Table 10: Phases of the experiential learning cycle in Emily’s episode of Promoting Active Learning

Frank’s episode of Conducting the Class, shown in Table 11, is another good example of a low-road transfer in the third phase of the cycle. When he began teaching online, he created lecture videos for each of the learning modules within his online class. He realized, as the online course progressed, that students were able to view the videos multiple times if necessary. Because some of his face-to-face classes were the same as his online classes, he was able to easily make those lecture videos available to his face-to-face students. After multiple iterations around the experiential learning cycle, Frank began moving toward a flipped classroom model for his face-to-face classes, recording lecture videos even for those face-to-face classes that do not have an online counterpart. The importance of such contextual affordances should not be understated.
More than one instructor mentioned, in both the interviews and survey, implementing strategies in the face-to-face classroom that came about as a result of the instructor’s new familiarity with a particular tool.

<table>
<thead>
<tr>
<th>Instructor: Frank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme category: Conducting the Class</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concrete experience</th>
<th>Frank recorded lecture videos for each module of his online course.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective observation</td>
<td>Lecture videos allowed students to watch multiple times if they wished.</td>
</tr>
<tr>
<td>Contextual affordance</td>
<td>Because he taught some of the same classes face-to-face as online, it was easy for him to make the online lecture videos available to his face-to-face students.</td>
</tr>
<tr>
<td>Active experimentation</td>
<td>He moved towards a flipped classroom model by making lecture videos available for students to view outside of class.</td>
</tr>
</tbody>
</table>

Table 11: Phases of the experiential learning cycle in Frank’s episode of Conducting the Class

A final example of alignment with the phases of the cycle demonstrates both abstract conceptualization and contextual affordance in the third phase. Sometime after Peter started teaching online, he began to wonder how thoroughly his face-to-face lectures were reaching his classroom students. Even though he could rely, to some extent, on body language and eye contact to determine if students were following the lectures, he could not be sure everyone was understanding. He also began to notice that students were not doing as well on the tests as he thought they should be doing. After observing the benefits of using low-stakes, self-check quizzes in his online class, he generalized that such quizzes could also be useful for his face-to-face students. He reported, however, that it was only because he had become familiar with his learning
management system’s quiz tool that he considered using it in his face-to-face class. As a result of this thinking, he began having his students bring laptops to class in order to take online quizzes after logical breakpoints in his class lectures. His example is shown in Table 12.

<table>
<thead>
<tr>
<th>Instructor: Peter</th>
<th>Theme category: Promoting Active Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete experience</td>
<td>Peter used online quizzes as learning checks in his online class.</td>
</tr>
<tr>
<td>Reflective observation</td>
<td>Even though he could use body language and eye contact to figure out if students were following his face-to-face lectures, he could not be sure everyone was understanding. He began to notice that students were not doing as well on the tests as he thought they should be doing.</td>
</tr>
<tr>
<td>Abstract conceptualization/ contextual affordance</td>
<td>Abstract conceptualization: Lecturing was the “easy” part of teaching. Knowing how well students were understanding the material was harder but very important to the teaching and learning process. Contextual affordance: He had become familiar with online quizzes from teaching online. When he first started teaching, he did not know there were tools available to conduct online quizzes.</td>
</tr>
<tr>
<td>Active experimentation</td>
<td>He implemented online quizzes after logical breakpoints in his class lectures.</td>
</tr>
</tbody>
</table>

Table 12: Phases of the experiential learning cycle in Peter’s episode of Promoting Active Learning
Although the initial concrete experience for both Peter (shown in Table 12) and Emily (shown in Table 10) were the same, i.e., using the quiz tool in their learning management system in their online courses, the eventual outcome in their respective active experimentation phases was different. Emily’s use of the tool in her online course prompted her to conduct out-of-class quizzes in her face-to-face course to ensure that students completed the readings. Peter, on the other hand, not only began using the quiz tool outside of class like Emily did but also took the additional step of using it in class to provide immediate feedback on how well students understood concepts presented in his lectures. Thus, the path through the experiential learning cycle could be initiated by the same experience for two instructors and yet progress through the cycle via different manifestations of the phases.

A similar phenomenon was seen in the cases in which instructors decided to make video lectures available to their face-to-face students outside of class. Several of the instructors in this study began using lecture videos in their face-to-face teaching after having the experience of creating lecture videos for their online classes. George created video tutorials on writing and statistics as remediation resources for students. Frank made his lecture videos available to face-to-face students because he believed that effective learning should be “a communicative process.” Using out-of-class lecture videos allowed Miranda to use class time to provide feedback to students while they worked on their programs and enabled Peter to use it for explicating difficult concepts for students. For all these instructors, the active experimentation phases were very similar, i.e., making online lecture videos available to students, but the goals and intentions of their reflection phases were quite different.

As seen in the examples provided in this section, the experiential learning cycle can be used to describe the process by which instructors in this study experienced the phenomenon of pedagogical change that occurred as a result of teaching online. The original model of the cycle
shown in Figure 8 is elaborated in Figure 9 to demonstrate areas of particular emphasis on phases of the pedagogical change process.

Figure 9: The experiential learning cycle as it applies to the phenomenon of pedagogical change that occurs as a result of teaching online

**Thematic Relationships and Connections to Theory**

Among the six theme categories into which the learning episodes have been organized are three which form a kind of super-category. These are 1) Promoting Active Learning, 2) Encouraging Peer Interaction, and 3) Establishing a Connection. They represent processes that take place during the offering of a face-to-face course throughout a semester and occur both within and outside of the classroom. In addition to the activities involved with conducting a live class session, these are the elemental, student-oriented processes with which instructors are concerned.
They correspond quite neatly to Moore’s (1989) three types of interaction designed by an instructor in which a distance student will commonly participate: 1) learner-content, 2) learner-learner, and 3) learner-instructor. Learner-content interactions take place between the learner and the course material. These interactions can include reading, answering questions, applying concepts to new situations, and creating novel work based on course concepts. Learner-learner interactions describe communication and collaborative work among students. Learner-instructor interactions take the form of student-instructor communication, homework assignments submitted by the students to the instructor, and feedback provided by the instructor on student work. Although this framework was developed to describe learner interactions in the context of distance education, it applies equally as well to face-to-face learning. Using it in this way might be considered a meta-example of transfer from online to face-to-face teaching. Table 13 shows the correspondence between the theme categories and Moore’s levels of interaction. I chose the phrase *Enabling Learner Interactions* to describe the super-category that encompasses the three sub-categories.

<table>
<thead>
<tr>
<th><strong>Enabling Learner Interactions:</strong></th>
<th><strong>Moore’s levels of interaction</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-categories</strong></td>
<td><strong>Learner-content</strong></td>
</tr>
<tr>
<td>Promoting Active Learning</td>
<td>Learner-content</td>
</tr>
<tr>
<td>Encouraging Peer Interaction</td>
<td>Learner-learner</td>
</tr>
<tr>
<td>Establishing a Connection</td>
<td>Learner-instructor</td>
</tr>
</tbody>
</table>

Table 13: Correspondence between theme categories and Moore’s (1989) levels of interaction

An additional theoretical framework from the literature on instructor thinking can be called upon that encompasses all six of the theme categories. As described in Chapter 2, McAlpine, Weston, Timmermans, Berthiaume, and Fairbank-Roch (2006) proposed four zones in which instructor thinking takes place. The zones are 1) conceptual, 2) strategic, 3) tactical, and 4)
enactive. In the conceptual zone, instructors thought about values, beliefs, and internal commitments to teaching. Thinking in the strategic zone focused broadly on a particular teaching task such as high-level course planning. In the tactical zone, plans were formed for concrete, specific situations. Such situations could include coverage of a certain topic, development of a weekly lesson plan, or the design of an individual assignment. Processes in the enactive zone occurred within the context of direct, instructional engagement with students. As the authors stated, the zones do not represent stages but rather types of thinking that have particular areas of focus. Comparing their framework to the theme categories proposed in Chapter 4, one can argue for a correspondence between the McAlpine et al. zones and the theme categories shown in Table 14.

<table>
<thead>
<tr>
<th>Theme category</th>
<th>McAlpine et al. zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflecting on Practice</td>
<td>Conceptual</td>
</tr>
<tr>
<td>Creating Structure</td>
<td>Strategic</td>
</tr>
<tr>
<td>Enabling Learner Interactions</td>
<td>Tactical</td>
</tr>
<tr>
<td>• Promoting Active Learning</td>
<td></td>
</tr>
<tr>
<td>• Encouraging Peer Interaction</td>
<td></td>
</tr>
<tr>
<td>• Establishing a Connection</td>
<td></td>
</tr>
<tr>
<td>Conducting the Class</td>
<td>Enactive</td>
</tr>
</tbody>
</table>

Table 14: Correspondence between theme categories and McAlpine et al. (2006) zones

Just as McAlpine et al. emphasized the non-phased nature of their zones, the theme categories are not meant to convey a series of phases. Rather, each of the theme categories should be understood to encompass one or more sets of instructor concerns, reflections, plans, and actions. In other words, each theme category was the location in which one or more learning episodes unfolded.
The conceptual zone from the McAlpine et al. study aligns with the theme of Reflecting on Practice because neither is linked to a specific instance in an instructor’s experience. Emily was one of the two instructors whose experience provided material for a learning episode of Reflecting on Practice. In her interview, she talked about how designing online activities put her on a path that led to greater reflection on practice and exploration of learning research. As she said, “Having converted to the asynchronous online delivery, I thought I really need to understand better how people learn in order to do a good job of this.” As is evident in this statement, she was not thinking about a specific class or lesson, but rather she was focusing her attention on the broad topic of how people learn. Describing her evolving and continuing interest in how to teach more effectively, she said, “It's more thinking about learning as opposed to thinking about teaching.”

Moving from the conceptual to the strategic zone, thinking became less abstract and more practical although still operating at a moderately high level. As McAlpine et al. said, “While the focus is on a specific teaching activity, the thinking is still broad and addresses relationships among elements: how various course elements align, the coherence between a class and the course, or between two courses” (p. 606). This overlap of the abstract and the practical suggested a focus on an entire course as opposed to a particular class session. Therefore, the strategic zone is aligned with the theme of Creating Structure, an example of which is Colin’s learning episode of setting expectations in a course. He said, “There were indications in the online environment where students were frustrated by not understanding what the expectations were.” While he did not have any complaints from his face-to-face students, it did cause him to become “much more aware and much more conscious of that back in the classroom as well.” This awareness resulted in his being more clear and explicit in policies on the syllabus and in written instructions about assignments and activities. Colin realized that his online students “like to know the schedule and
know what’s coming.” Teaching online made him sensitive to the importance of structure to face-to-face students as well.

The tactical zone is aligned with the super-category of Enabling Learner Interactions. In the words of McAlpine et al., “This zone represents the operationalization of plans for action” (p. 606). In this zone, thinking became very concrete, focusing on specific teaching challenges as they occurred in particular settings. For example, in George’s case of Promoting Active Learning, he said that, when he began teaching online, “I saw right away, right from the very course I taught, that students really had to do the readings before they could do the postings.” As a result, he began using online quizzes and discussion postings between face-to-face class sessions to assess and reinforce the new concepts students were encountering in the reading material. In this example, George recognized that there were mechanisms in the online environment to ensure that students completed the readings. Of his face-to-face classes, he said, “I was lucky if 50 percent of the students in the class had participated actively in terms of participating in discussions, asking questions, interacting back and forth.” In other words, he could not be sure if his face-to-face students who did not participate were really learning or, indeed, if they were even prepared to engage in discussion about the material. This was a specific, defined problem to which he created a targeted solution, i.e., requiring students to complete online activities in between class sessions.

The enactive zone described McAlpine et al. is, of course, aligned with the category of Conducting the Class. In this zone, instructors were concerned with making the most of class time, leveraging their direct contact with students for maximum benefit to students’ learning. For example, because Miranda did not want to “waste time explaining the same thing over and over again,” she created her screencasts to explain processes she knew that students usually found difficult. Peter wanted to use class time to explain the really difficult, but important, concepts to students. So he, too, created short videos covering the “basic introductory stuff” that students could view outside of class. Allen, too, was interested in optimizing class time. The impact that
teaching online had on him in this regard was that he became more deliberate about organizing each class session so as not to waste time. Miranda echoed this idea when she described how she prepared for class sessions by working through problems using a real data set. She said, “Sometimes in science you don't exactly want a contrived data set but you also don't want one that is so messy that it prevents the students from making the observation you want them to be able to make.” Because she developed the habit of carefully staging this kind of activity for her online classes, she began preparing her data sets ahead of time for her face-to-face class in order to step the students along the path she knew would benefit their learning.

A Proposed Thematic Model

Of the 22 learning episodes extracted from the interviews, the majority focused on establishing optimal conditions for student learning, either within or outside of the classroom, as shown in Table 5 in Chapter 4. Instructors expressed concern about such things as ensuring that students completed all the readings, assessing student progress on an ongoing basis, promoting critical thinking about the course material, and increasing participation in class discussion. Relationships among the six theme categories can be depicted in the proposed model shown in Figure 10.

The proposed model begins with the process of Reflecting on Practice because that is the starting point for the decision-making that occurred in the learning episodes. Such reflection informed the planning and organization of the course before it actually ran and also informed the instructor’s decision-making throughout the semester. For this reason, the circle that depicts Reflecting on Practice is shown with two outward-pointing arrows. One points to the circle that represents course planning and organization, i.e., Creating Structure. The other points to the large
During the run of a course, there were four themes with which instructors were concerned. Three of these themes – Promoting Active Learning, Encouraging Peer Interaction, and Establishing a Connection – focus on processes which may occur both inside and outside of the face-to-face classroom, i.e., both during a class session and between class sessions. These three themes correspond to Moore’s (1989) three levels of interaction and make up the super-category of Enabling Learner Interactions. The fourth theme, Conducting the Class, focuses exclusively on what happens in the actual face-to-face classroom. That theme is drawn with a dashed perimeter and situated within the larger circle representing the three sub-themes involved in Enabling Learner Interactions. This indicates the instructor’s ongoing concerns with those sub-themes both within and outside of class. In other words, the instructors interviewed for this study focused a good deal of attention on creating conditions during the semester to ensure that the processes described by those theme names would occur both in class and outside of class. The bi-
directional arrows between the three sub-themes and the theme of Conducting the Class indicate the mutually reinforcing relationship among the themes.

Incorporating Moore’s (1989) levels of interaction as well as the four zones identified by McAlpine et al. (2006), the proposed thematic model can be redrawn as in Figure 11.

![Diagram](image)

Figure 11: Categories of pedagogical change incorporating levels of interaction from Moore (1989) and zones from McAlpine et al. (2006)

**Meta-Themes**

As mentioned previously, the identification and structuring of learning episodes provided a solid foundation for the articulation of theme categories. Drawing connections between those categories and existing theoretical frameworks added further definition to the themes. The six themes that emerged from the analysis of the learning episodes closely reflected major areas of
focus and concern described by the interviewees in their own words. Each one of the 22 learning episodes told a story about some kind of changed experienced by the instructors in regard to their face-to-face teaching that had come about as a result of their teaching online. By the end of the analysis, the stories were clear and sharply-defined. They cohered almost naturally into the proposed model. Yet, after the thematic analysis was complete and the proposed model had been developed, I realized that some of the influences at work in the learning episodes had not been explicitly articulated by the interviewees. I use the term *meta-themes* to describe these below-the-surface influences. Although they may not have functioned as components of a learning episode, nevertheless, their existence contributed to the outcomes of many of the episodes. Three meta-themes were identified:

1. Affordances in technology and media
2. The permeability of the boundary between in-class and out-of-class learning activities
3. A shift in focus from teaching to learning

**Affordances in Technology and Media**

A phenomenon that was mentioned obliquely from time to time in the interviews was the enhancement of the instructor’s technology skills that occurred as a result of teaching online. Even instructors who had a technology orientation prior to teaching online commented that some of the strategies they implemented came about as a result of their having been exposed to tools and technologies they had not used before. Teaching online required instructors to make much greater use of their learning management system than their face-to-face classes had. They reported increased familiarity and confidence in using email to communicate with students, deploying online quizzes, analyzing quiz data, conducting online chats, and running multiple
between-class discussions. They also experimented quite a bit with other technologies for creating lecture videos and narrated PowerPoints.

As Miranda wrote in one of her survey responses, “If I had never taught online I would never have been forced to explore and get good at the technology used to introduce new material asynchronously but effectively.” Emily also mentioned, in discussing her use of online quizzes, that she would not have considered using them for her face-to-face students if she had not learned about them through teaching online. For Peter, “Part of it was realizing what sort of tools were out there that could be used because, when I started 10 years ago, I didn't use any of those things. It was all in the classroom.”

A related phenomenon was the existence of already-developed course materials such as videos and online quizzes that were created as a necessary part of an online course. Once the development of the materials had been accomplished for an online class, many instructors took the opportunistic step of making those materials available to their face-to-face classes. While this step, in itself, does not describe a very deep level of reflection or a significant expenditure of effort, it certainly can lead to both. For example, Miranda created screencasts for online students and then began using them for her face-to-face students. As time went on, she created more and more of them for her face-to-face classes because they provided so much benefit.

A similar process occurred with Frank. Once he had created a set of lecture videos for his online class, he decided to make them available in his corresponding face-to-face class. After some time, he began to rely more heavily on the videos by making them a required activity. Eventually, because he was so pleased with the results of his experiment, he reported that he planned to create lecture videos for additional face-to-face classes, even those that did not have an online counterpart.
The Permeable Boundary between In-Class and Out-of-Class Learning Activities

Although the question of whether online teaching requires more or less time than face-to-face teaching remains open (Van de Vord & Pogue, 2012), the fact that the physical classroom is eliminated suggests that the online instructor’s weekly teaching schedule has become, if not lighter, at least less structured. At the same time, the availability of online technologies has made it easier for campus-based students to engage in off-site learning activities (Calvert, 2005; Palmer, 2008). Among the instructors interviewed for this study, these factors may have contributed to a perception of greater permeability of the boundary between in-class and out-of-class learning activities. Instructors created out-of-class activities both to extend the discussion and learning from one class session to the next as well as to ensure that students were appropriately prepared for activities that would take place in the next week’s class.

A great many of the teaching and learning strategies mentioned in both the interviews and survey focused, at least in part, on student activities outside of the classroom. There were multiple mentions from the interviews and survey of creating lecture videos for students to view between classes. Among the interviewees, Frank was the most pronounced case of classroom flipping. After creating lecture videos for his online classes, he began making them available as supplemental viewing for his corresponding face-to-face classes. After a time, he made the video viewing mandatory instead of optional and restructured the way he used class time so that about half of it was devoted to student group work and half to a more traditional lecture and discussion format. Frank used PowerPoint to create slides, Audacity (2014) to record narration, and Windows Movie Maker (2014) to put the two together.

Peter also moved a good deal of lecture material onto narrated slides. He used PowerPoint to create the slides and ScreenFlow (2014) to record the narration and produce the final product. In discussing the kinds of content that he had moved online in this way, he said he
liked to use this method for foundational material as well as material that added depth to a core concept. But, he said, “The things I think the students are going to have the most trouble understanding, I still try to do that in the classroom so if there are any people that aren't getting it, hopefully I can catch that and explain it in different ways.”

John liked creating short, three- or four-minute videos in which he showed himself following a series of steps using the software students used to complete programming assignments. He narrated the videos as he progressed through the steps. He found that method much less time-consuming than writing up instructions with screen shots and he liked the fact that students could review the videos as often as they liked. Miranda used a similar strategy. She created what she called “screencasts” by providing narration as she worked out a series of steps within the software program her students used to analyze geoscience data. She focused her efforts on the kinds of problems that students had had in the past. She built up a substantial library of screencasts over the course of several semesters.

A final example of between-class videos from the interviews comes from George. When he discovered that his online students needed remediation in subjects like statistics, he created online tutorials to fill in the gaps and then made them available to his face-to-face students as well.

These examples demonstrate different points along a continuum of required to optional student viewing. Frank and Peter inclined towards making the videos a required part of the course while John, Miranda, and George gave students the flexibility to decide how they would use the videos. Several of the survey responses also included mention of online videos but none provided much detail about how instructors used them or the type of material they covered.

Another type of frequently mentioned between-class activity was online discussion. Several of the interviewed instructors used online discussion in their face-to-face classes as a way to extend the classroom discussion. Some instructors used online discussion to prepare students
for the upcoming class session. For example, John used discussion forums as “springboards for in-class discussions.” John also used online discussion to facilitate group assignment work. Among the interviewees, Miranda, George, John, and Peter mentioned using online discussion between class sessions. Examples from the survey included using the discussion board as a place where students could post questions for everyone to see as well as a record of self-introductions that remained in place during the semester.

Another between-class activity mentioned in both the interviews and on the survey was the use of self-check quizzes to ensure that students completed the assigned readings and videos. When conducted on a learning management system, short low-stakes assessments such as these were helpful in conveying information to instructors about students’ understandings and misunderstandings. They also provided information to students themselves about their grasp of the material.

An additional category of between-class activity instructors mentioned was checking in with students. One survey respondent wrote that teaching online had changed “the rate and schedule of how I check in and communicate with students.” Another wrote, “I have begun sending e-mails between face-to-face classes to reiterate materials we study in class.” As was described in Chapter 4, John was prompted to institute virtual office hours for his face-to-face students. Although that experiment was not as successful as he had hoped, he did succeed with his strategy of having face-to-face students make private blog postings about their learning. This activity gave him a chance to understand his students’ progress and provide feedback to them. A related comment from the survey noted that teaching online “reinforces the need to provide feedback early and often in all courses.”

Of course, a traditional activity for which instructors use out-of-class time is homework. Several of the interviewees and survey respondents mentioned assignment restructuring as one of the changes they made to their face-to-face classes after teaching online. Examples from the
interviews included both Colin and John’s practice of providing more explicit language in course policies and assignment instructions. Emily’s learning episode of assignment restructuring entailed assigning a grade to a peer review process that she had formerly conducted as a non-graded activity. Although it was not presented as a learning episode, George mentioned incorporating rubrics into his face-to-face courses as a result of teaching online. Several survey respondents commented in unspecific terms that the experience of teaching online resulted in changes to the grading practices they used in their face-to-face courses and some mentioned developing assignments that were more applied, i.e., provided greater opportunity for situated learning (Brown, Collins, & Duguid, 1989).

A Shift in Focus from Teaching to Learning

Examining the survey responses and interview transcripts on the subject of assumptions regarding effective teaching and successful learning, an obvious directional shift among respondents was seen. As might be expected when teaching students who are never in the same physical location as the instructor, faculty focused much thought on how to reach these distant students and what their learning processes might be. Assumptions often changed in a direction away from viewing students as an audience of somewhat passive, albeit receptive, listeners and toward a perspective centered on communicating with a distributed group of autonomous, independent learners. As Emily simply wrote, “I no longer assume that lecture is the most effective way of teaching.” Another instructor characterized it like this: “It has softened my assumption about just how essential direct instructional methods are to effective teaching and learning.”

Accompanying the recession of the lecture as the preeminent teaching method was an increase in experimentation with strategies that emphasized the active, affective, and social
processes involved in learning. From the survey responses, for example, one instructor “learned the value of helping students create their own learning communities” while another began to “to encourage students to take more of a lead.” Instructors remarked frequently on their role in creating an environment conducive to learning. One instructor commented on the “quality of the teacher-learner relationship” and its influence on the learner’s “willingness to think beyond the basic assignments.” For another instructor, teaching online had “reinforced the importance of using multiple approaches to engage students.” One respondent remarked on the value of providing an organizing framework for students’ learning. That instructor wrote, “I put more emphasis on tying sections of the course together so that students see the bigger picture.”

Using terms from the literature, the impact on assumptions seems to describe a movement on the part of instructors away from a focus on “what the teacher does” to a concern with “what the student does” (Biggs, 1999). Barr and Tagg (1995) would call this a shift from an instruction paradigm to a learning paradigm. In Kember’s (1997) review of studies on instructors’ assumptions about effective teaching and learning, he characterized the contrast as a teacher-centered content orientation on one side vs. a student-centered learning orientation on the other. And, as the literature on online learning would put it, the instructors saw their role as changing from “sage on the stage” to “guide on the side” (e.g., Berge, 1995; Conrad, 2004; Mazzolini & Maddison, 2003; Palloff & Pratt, 2000; Ragan, 2008).

Although some studies have demonstrated that instructors may become more learning-oriented as a function of time as opposed to a particular intervening experience (e.g., Entwistle & Walker, 2000; McKenzie, 2003), many instructors in this study, both in the interviews and on the survey, described themselves as moving toward a learning orientation as a result of teaching online. As Emily said when she was faced with the task of converting her face-to-face classes to an online format, “It got me thinking…if I want to be an effective teacher, there's the teaching side of it, but then, how do people learn?”
Interactions among Themes and Meta-Themes

The meta-themes introduced in this section can be viewed as underpinnings for the proposed model. Each of the three meta-themes represents some kind of trend over time. First, instructors became more familiar with online technologies and more aware of their potential. Second, the distinction became blurred between the kinds of activities normally conducted during class time and those reserved for out-of-class time. The trend was to flip the class, using the learning management system to host video lectures and conduct online quizzes so that valuable class time could be used for group activities and coaching sessions with instructors. Third, instructors showed an increased interest and concern with how students learn and what they do while they are learning. What is the interaction among these meta-themes and how do they relate to the proposed model?

The teaching strategies identified in this study, especially those implemented between class sessions, relied a great deal on the use of technology. Between-class strategies included posting online lecture videos, conducting online discussion, and requiring students to complete online quizzes. In the case of online quizzes and lecture videos, the impetus for some instructors to make use of them may have been the fact that they had already been created for their online classes. Several responses to the open-ended questions on the survey mentioned making such materials available to face-to-face students. Of course, some instructors continued to create such materials outside of their online classes. Both Miranda and Frank reported initially relying on materials from their online classes and then moving on to develop new materials specifically for their face-to-face classes. In cases like this, it was the combination of the availability of already-created materials with an expanded repertoire of technology skills that contributed to the creation of additional materials.
In cases where instructors began using online discussion in between class sessions, it was not the presence of a set of already-created materials but rather an increasing familiarity and comfort with a technology tool combined with new insights about the tool’s utility and potential that prompted instructors like George and John to begin conducting online discussion extending from one class session to the next. In these situations, however, the instructor’s increasing interest in the learner’s perspective may also have played a role. This focus on the student learning process may be what led some instructors to become more interested in the three sub-categories of Enabling Learner Interactions, i.e., promoting active learning, encouraging peer interaction, and even establishing a personal connection with students. Indeed, many of the reported strategies – breaking down complex concepts, providing rubrics for homework assignments, using case studies for more applied learning – are well-aligned with the learning paradigm described by Barr and Tagg (1995).

Peter’s learning episodes provide good examples of interactions among three of the meta-themes. As the boundary between in-class and out-of-class activities became more permeable for him, his enhanced technology skills and his sharpened focus on student learning processes led him to experiment with the use of online quizzes outside of class to ensure that students had completed the readings and during class sessions to assess student understanding of points he made in his lectures. Of course, moving formative assessments into the classroom meant moving some of the lecture material outside of class. Peter had well-defined criteria for what he wanted to achieve both during class time and outside of class.

He thought it was important to explain difficult concepts in a face-to-face context in order to clarify misconceptions. Therefore, he used class time for lectures that covered this material and short, classroom quizzes to calibrate students’ understanding. Outside of class, students watched lecture videos covering more basic concepts and completed online quizzes for those as well. He also liked using class time for focused discussion and collaborative learning. Noticing that some
students did not participate as much as others in classroom discussion, he also set up online
discussion between class sessions to give everyone a chance to contribute their thoughts.

Relating the meta-themes back to the proposed model of the theme categories, shown in
Figure 11, the dashed line that separates Conducting the Class from the three sub-themes that
make up Enabling Learner Interactions reflects the increased permeability of the boundary
between in-class and out-of-class learning activities.

The instructor’s move towards a learner-centered perspective can be situated within the
conceptual zone. Reflecting on practice occurred in this zone. The learning episodes that
informed the development of this theme involved the instructors’ reflections on why they taught a
lesson in a particular way and what they were trying to have the learner achieve. Their increased
sensitivity to the learner’s perspective was a factor in their reflections. Emily summed up this
general move towards the learner’s perspective in her comments that, “The whole point isn't me
reading. The point is people learning.”

The enhancement of instructors’ technology skills and the availability of a cache of
materials from their online courses may be placed within the tactical and enactive zones where
planning and conducting both in-class and between-class teaching strategies take place. In many
cases, the availability of the already-created online materials was the trigger for incorporating
those materials into their face-to-face classes. Taking that practice a step further, their developing
technical expertise provided a foundation for continuing to create new materials and find new
ways to use the tools with which they had become familiar.

Chapter Summary

This chapter began with a review of the structure of a learning episode. For each of the
learning episodes, the initiating trigger was an unsolved problem or challenge. This was followed
by a set of observations and reflections that led the instructor to make some kind of pedagogical change. The components of the learning episode were related to Kolb’s (1989) experiential learning phases of observing and reflecting, creating an abstract conceptualization, and conducting an experiment for further observation. Mezirow’s (1991) levels of reflection and Kreber and Cranton’s (2000) domains of teaching were used to focus on aspects of the reflective observation phase and Salomon and Perkins’s (1989) learning transfer theory was applied to the abstract conceptualization phase to highlight mechanisms involved in learning transfer between online and face-to-face teaching experiences. A distinction was made between high-road and low-road transfer. Abstract conceptualization was suggested as the mechanism necessary for high-road transfer while contextual affordance was postulated as the means by which low-road transfer occurred.

A proposed model, shown in Figure 11, demonstrated the relationship among the themes. The theme of Reflecting on Practice, which described instructors’ increased concern with why they teach the way they teach, was shown to influence processes involved in all the other themes. A central theme was Conducting the Class and how the experience of teaching online had influenced instructors’ thinking about the purpose of their face-to-face class sessions as well as their use of class time. Another three themes were closely related to the instructors’ intentions for their students. These were Promoting Active Learning, Encouraging Peer Interaction, and Establishing a Connection. These themes echoed Moore’s (1989) three-category framework of learner interactions in a distance education setting. They reflected the instructor’s focus on what the student does, both in and outside of class, during the semester in which the class is running. These three themes were grouped into the super-category of Enabling Learner Interactions.

An additional theoretical connection was made between the proposed model and the teacher thinking framework of McAlpine, Weston, Timmermans, Berthiaume, and Fairbank-Roch
(2006) in which components of the model were shown to align with the conceptual, strategic, tactical, and enactment activities of instructors.

Three meta-themes were introduced to explain underlying influences on the processes involved in the themes. These were 1) affordances in technology and media, 2) increasing permeability of the boundary between in-class and out-of-class learning activities, and 3) a shift in focus from teaching to learning.
Chapter 6

Conclusion

This study has described the experiences of eight faculty whose online teaching experience had an impact on their assumptions about effective teaching and learning as well as their face-to-face teaching practices. Although the findings do not support a claim that the phenomenon, in itself, is a motivator for faculty to begin teaching online, they do provide evidence for a variety of impacts that the experience can have on an instructor’s face-to-face teaching. As described by the model of the theme categories, changes were experienced in the instructors’ conceptualizations of teaching and learning, strategic planning for face-to-face teaching, and tactical moves involved in creating an effective learning environment, both in the classroom and outside of class.

Implications for Practice

There are several ways in which an understanding of the phenomenon described in this study might be beneficial to faculty developers and instructional designers working with faculty in higher education. First and foremost, it might be viewed as a lever to help faculty improve their face-to-face teaching. According to Knight, Tait, and Yorke (2006), the primary way faculty in higher education learn to teach is “simply doing the job of teaching” (p. 323). Other studies (e.g., Chism, 2004; Pickering, 2006; Post, 2011; Van Eekelen, Boshuizen, & Vermunt, 2005, Warhurst, 2003) have also recognized the primacy of on-the-job activity as a means of learning about teaching.

Given the important contribution that doing the job of teaching makes to an instructor’s learning about teaching, faculty developers and instructional designers who work with faculty to
prepare them for online teaching may want to take advantage of these one-on-one opportunities to set the stage for instances of learning transfer from online to face-to-face teaching. Strategies for accomplishing this might include talking with faculty about similarities and differences between their online and face-to-face teaching, encouraging them to deliberately reflect on how lessons learned from online teaching might benefit their face-to-face classes, and offering to observe them teaching a face-to-face class in order to suggest some explicit connections between the two teaching formats. Faculty developers might also assist them in adopting a systematic technique, such as self-regulated learning, for pursuing a specific learning goal. Many of these strategies echo Kreber’s (2004) recommendation that faculty development efforts include an element of fostering in faculty a self-efficacy and self-identification as learners.

In addition to the opportunity presented in these one-on-one occasions to assist online faculty to transfer strategies to their face-to-face classes, additional opportunities exist for instructional designers to act as agents in the diffusion of innovation. Instructional designers in higher education interact with faculty from all disciplines who seek consultation on a wide variety of teaching challenges. As such, they are perfectly positioned to transmit information from one faculty interaction to another, thus introducing appropriate applications of online teaching strategies to face-to-face instructors, even when those face-to-face instructors do not teach online.

Another outcome that the phenomenon under investigation in this study might be leveraged to produce is the creation of faculty learning communities in which instructors who teach in both formats share information and teach one another. In their discussion of instructors’ self-regulated learning, Van Eekelen, Boshuizen, and Vermunt (2005) noted that self-regulated learning rarely occurs as a completely solitary activity. Indeed, other authors have proclaimed that instructor-to-instructor communication plays a major role in learning about teaching (e.g., Hoekstra, Brekelmans, Beijaard, & Korthagen, 2009; Maaranen, Kynaslahti, & Krokkfors, 2008). As recognition of the importance of this type of communication among faculty has increased,
faculty development efforts have begun to focus on creating and maintaining such learning communities, not only because they promote learning about teaching but also because they foster collaborative innovation, positively influence student learning, and promote constructive relations among faculty (e.g., Glowacki-Dudka & Brown, 2007; Stevenson, Duran, Barrett, & Colarulli, 2005).

Another potential implication for practice is to use the phenomenon described in this study as a lever to increase technology integration into face-to-face teaching. While it certainly can be argued that technology use, both in and outside of the classroom, has its disadvantages, (e.g., Postman, 1992; Turkle, 2011; Young, 2010), contemporary life requires all of us to use and engage with it. Integrating it into one’s teaching practice is just one of the skills required by faculty today (McKee & Tew, 2013). Accomplishing this, however, is not without its complexities and challenges (Lawrence & Lentle-Keenan, 2013). Koehler, Mishra, and Yahya (2007) have argued that its uptake will be more effective when carried out in the context of ordinary teaching and connected to instructors’ pedagogical intentions for teaching a particular subject. This suggests that instructional technology professionals responsible for facilitating faculty technology integration might wish to make use of the opportunity afforded by the phenomenon of online-to-face-to-face pedagogical change when working with instructors who teach in both formats. As was seen in several of the learning episodes, once instructors became familiar and comfortable with a new technology, they often felt encouraged to experiment with it in their face-to-face classes.

A final possible area in which the phenomenon under study may be leveraged by faculty developers is in promoting participation in the scholarship of teaching and learning. Several researchers (e.g., Benson & Brack, 2006; Goss & Boyd, 2003; Kreber & Kanuka, 2006) have speculated that teaching online might encourage faculty to engage in scholarship of teaching and learning activities. Such an outcome might be expected when an instructor begins teaching in a
new modality. Among the interviewees, both Emily and John described a level of engagement with the scholarship of teaching and learning. Emily reported that, when she was preparing to teach online, she began to seek out information about learning theory in order to align her online course with her students’ learning needs. John mentioned collaborating with a colleague to present at conferences about his use of reflective blogs with his face-to-face students. These examples, and others from the interviews, showed evidence of the hallmarks of the scholarship of teaching and learning proposed by Trigwell, Martin, Benjamin, and Prosser (2000):

1. Instructors follow the literature on teaching and conduct research-based experiments in their own classrooms.

2. Instructors reflect systematically and critically on their own teaching.

3. Instructors who conduct action research communicate results to a wider community of teacher scholars.

4. Instructors move from a teaching-centered to a learning-centered conception of teaching.

Participating in the scholarship of teaching and learning has become a key strategy for many teaching centers in higher education (Schwartz & Haynie, 2013). Faculty developers might wish to cultivate relationships with faculty who teach in both modalities to encourage them to reflect on their experiences and experiment systematically with new strategies in their face-to-face classes for the purpose of contributing to the literature on effective teaching strategies.

**Contributions to the Literature**

This study examined the experience of faculty for whom the experience of teaching online has had an impact on their assumptions about effective teaching as well as their actual face-to-face teaching practice. As such, it has contributed to the literature on teaching in higher
As more and more traditional institutions develop online programs, the information provided by this study should be informative to faculty as they prepare to teach online and instructional designers working with them.

As the first study in the literature to provide a phenomenological account of that experience, it introduced the learning episode as a useful structure for examining that experience. Based on the analysis of multiple learning episodes, it proposed a model that can be used to conduct further research and demonstrated relationships between the model and several relevant theoretical frameworks. Connections between the components of the model were made to levels of interaction identified by Moore (1989) and zones of teacher thinking by McAlpine et al. (2006). To describe the learning episodes, Kolb’s (1984) model of experiential learning was synthesized with Mezirow’s (1991) three levels of reflection, Kreber and Cranton’s (2000) domains of teaching, and Perkins and Salomon’s (1994) theory of learning transfer.

An additional contribution is the confirmation of the most common findings from the few existing studies of this phenomenon. While other studies (Lowes, 2008; McQuiggan, 2011; Shea et al., 2002; Skibba, 2009; Wiesenberg & Stacey, 2008) have each identified smaller sets of “reverse benefits” (Pennington, 2005), my study has been more comprehensive in its identification of impacts than any study to date.

It also fills a gap identified by Henderson (2003) that the existing research on instructors’ conceptions of teaching has been about teachers teaching, not students learning, and what is needed is more research into the beliefs instructors have about student learning processes. He believes that “what teachers think about students’ attention, memory, learning strategies, and motivation might influence their … assumptions about what their students bring to the teaching-learning situation, the teaching methods a teacher employs, and how a teacher evaluates learning” (p. 5). A good deal of teacher thinking about student learning was revealed in this study and much
of it was shown, through a description of the learning episodes, to be related to the teaching and assessment strategies employed by instructors in the study.

Limitations

All research studies, both quantitative and qualitative, have limitations resulting from choices made by the researcher(s) regarding what to study and how to study it. Limitations to this study, as in other studies, arise from the particular choices I have made. For example, although a purposeful sampling strategy enables the development of information-rich, contextual descriptions of the phenomenon under study, it limits generalizability. Because phenomenology is a qualitative research method, studies that use this method are not able to achieve rigor in the same way that traditional, quantitative studies do. However, as described in Chapter 3, this study applied techniques and criteria established by Lincoln and Guba (1985, 1986) to ensure rigor in qualitative research.

Generalizability may also be limited due to the context in which this study was conducted. The World Campus is a mature and robust operating unit for distance education programs within the Pennsylvania State University. Its staff consists of multiple instructional designers, technologists, production and quality assurance specialists, and other administrators and managers (Learning Design @ Penn State World Campus, 2012). The model of pedagogical change proposed in this study may not hold true for contexts with fewer support resources and/or an institutionally different strategic orientation concerning distance education.

Another limitation arises from the fact that the research did not examine in detail the conditions under which each instructor who participated in the study first taught online. Because the development of an online course requires skills and knowledge beyond that of the typical higher education faculty member, support from an instructional design team is frequently needed
for initial development (Oblinger & Hawkins, 2006). Although most of the interviewees reported having worked with instructional designers when they began teaching online, no attempt was made in this study to uncover the types of online teaching strategies the instructional designer may have introduced into the online courses taught by these faculty. It is not possible, therefore, to separate the act of teaching online from any of its antecedent activities such as working with an instructional designer. In other words, the support and input provided by an instructional designer may have contributed as much as or more to the phenomenon of pedagogical change than the act of teaching online. Nevertheless, the fact remains that, for many faculty, the prospect of teaching online is the impetus for calling on an instructional designer for the first time in one’s career just as it is the impetus for learning more about instructional technology and reflecting on one’s practice.

Other factors that may have influenced the extent of the pedagogical change instructors in this study experienced were the instructors’ pre-existing expertise with both technology and teaching. Thus, a backward path cannot be retraced to reveal how the various elements of the instructors’ early online courses came together. Nor can it be stated with any certainty what kinds of conditions may or may not lead to this phenomenon as the purpose of the study was to describe the experience of the phenomenon, not to make comparisons between it and counter cases.

Finally, although the instructors in this study self-reported that teaching online resulted in changes in their assumptions about effective teaching and their face-to-face teaching practices, it is not possible to claim causation between the experience of teaching online and the reported changes. The ideas the instructors transferred and the insights they developed may have come about anyway as a result of years of teaching. For that reason, findings of this study should be seen as suggestive rather than conclusive.
Recommendations for Further Research

One set of recommendations for further research stems from the limitations of this study. An obvious recommendation is to study the conditions under which some online instructors experience positive impacts on their face-to-face teaching while others do not. Another would be to focus on the conditions under which instructors first began to teach online in order to assess the effect those initial conditions may have on the phenomenon of pedagogical change. Most of the instructors interviewed for this study reported that they designed and developed the online courses they eventually taught. It would be useful to investigate whether differences in pedagogical change exist between instructors who taught online courses designed by another instructor and those who both designed and taught their online courses.

Suggestions for additional comparison studies include examining successful vs. unsuccessful strategy transfer and partial vs. complete transfer. One of the learning episodes described in this study was an example of an unsuccessful strategy transfer. Although most of the transferred strategies described in this study were thought to be successful by the instructors who implemented them, John reported that his experiment with virtual office hours for his face-to-face class fell short of his expectations. Information on the kinds of strategies that succeed vs. those that fail might be helpful for instructors attempting to implement new face-to-face teaching strategies based on those used in the online environment.

As an example of an incomplete strategy transfer, Allen mentioned the challenge in his face-to-face class of having students adhere to time limits when giving presentations. In his online class, he had students narrate voice-over presentations within prescribed time limits. He reported that he was still trying to figure out how to enforce time limits more effectively in his face-to-face class. It might be useful to explore uncompleted episodes such as this to identify barriers to successful transfer. Perhaps the topic could be investigated within the framework of
“barriers and bridges” (p. 33) identified by Malkki and Lindblom-Ylanne (2012) in their study of the paths between reflection and action taken by instructors in higher education.

Several theories were used to illuminate the findings of the data analysis phase of this study. To describe the process exemplified in the learning episodes, Kolb’s (1984) theory of experiential learning was applied and augmented with elements from Mezirow’s (1991) levels of reflection, Kreber and Cranton’s (2000) domains of teaching, and Salomon and Perkins’s (1989) learning transfer theory. As a means of situating the theme categories within the larger context of the literature on faculty development for face-to-face and online teaching, two theories were called upon: Moore’s (1989) levels of interaction as well as the teacher thinking zones identified by McAlpine et al. (2006). Additional theories that hold promise for further study of the phenomenon of pedagogical change that follows the experience of teaching online are self-regulated learning (Zimmerman, 2002) and technological pedagogical content knowledge (Mishra & Koehler, 2006).

Self-regulated learning might be used much the same way that experiential learning was used in this study, to focus on phases of the instructor’s process of making connections between online and face-to-face teaching. Researchers who have used the framework of self-regulated learning to examine teaching in higher education include Kreber, Castleden, Erfani, and Wright (2005), Lindblom-Ylanne, Nevgi, and Trigwell (2011), and Van Eekelen, Boshuizen, and Vermunt (2005).

Technological pedagogical content knowledge, with its three-part focus on technology, pedagogy, and content knowledge, could be used to study the types of technology-based strategies instructors transfer from online to face-to-face teaching and the success with which they implement the strategies. Indeed, many of the statements made by interviewees in this study showed evidence of all three types of knowledge. For example, Frank’s description of how he created his lecture videos using PowerPoint, Audacity, and Windows Movie Maker indicated a
particular level of expertise with the software he mentioned. In discussing effective use of class
time, Miranda’s statement that “… what students need help doing is sitting and working out the
bugs in their programs” was an indicator of pedagogical knowledge. Peter’s statements
distinguishing between basic and advanced levels of understanding about geology demonstrated
his content knowledge.

Researchers such as Doering, Veletsianos, Scharber, and Miller (2009) have collected
qualitative interview data and coded it for its alignment within the technological pedagogical
content knowledge framework. An approach like this could be used to contribute additional
insights into the meta-theme identified in Chapter 5 related to technological affordances. Kohen
and Kramarski (2012) have suggested combining technological pedagogical content knowledge
with self-regulated learning to assess teachers’ technology integration readiness. Perhaps the
combination of these two frameworks could be used to shed further light on the phenomenon of
pedagogical change investigated in this study.

Another promising avenue for research is to attempt to validate the model proposed in
this study by using it to conduct further investigation of the phenomenon, examine individual
themes, and study different populations of instructors, e.g., those using different learning
management systems. The proposed model might also be used to guide the development of a
survey that could be administered to a much larger population.

A final recommendation for further research concerns a phenomenon that surfaced in a
few of the interviews as an unintended finding. In the literature of barriers and motivations to
teaching online, flexibility of time and place was often mentioned as a factor that motivated
faculty to begin participating (e.g., Maguire, 2004; Shea, 2007; Thompson, 2003). It was not a
surprise, therefore, that it was mentioned more than once in the interviews. What caught my
attention in two of the interviews was the proximity of the uptake of online teaching with a major
life milestone. Miranda mentioned in passing that she began teaching online around the same
time that she and her husband were planning a family. George did not comment explicitly but it was clear that he had begun teaching online when his retirement from full-time teaching was drawing near. Both Miranda and George were very enthusiastic about online learning and their participation in it. Perhaps a fruitful line of investigation would be to study the phenomenon of uptake in the context of lifespan development theories such as those put forth by Erikson (1959) and Levinson (1978, 1996).

Chapter Summary

This chapter began with a discussion of implications for the practice of faculty development and instructional design in higher education. Professionals working in these settings might use an understanding of this phenomenon to diffuse teaching innovations, create faculty learning communities, increase faculty knowledge of technology, and engage faculty in the scholarship of teaching and learning activities, all in the service of assisting instructors in developing themselves as teachers and providing improved teaching and learning conditions for students.

This research has contributed to the literature on the impact of teaching online on teaching beliefs and face-to-face practices by conducting the first phenomenological study of the topic, confirming impacts that have been identified by other studies, and proposing a model that can be used in further research. Ideas for such research include investigating the conditions that lead to optimal impact and using frameworks such as self-regulated learning and technological pedagogical content knowledge to discover additional insights about the phenomenon.
Closing Remarks

I became interested in the phenomenon of pedagogical change experienced by instructors as a result of teaching online when I worked as an instructional designer with faculty at my institution who taught both online and face-to-face courses. One instructor described a strategy she used in her online course in which students were required to use the online discussion board to engage in small group discussion about the assigned readings before they could answer questions in the whole-class discussion. As an experiment, she began having her face-to-face students use the online discussion board in the same way in order to prepare for the weekly in-class discussions. She observed that, when students engaged in online activities like this throughout the week, they were able to think more critically and participate in deeper levels of discussion during class time. Her narrative resonated with me and I passed it on as a suggestion to several face-to-face instructors with whom I worked.

Experiences such as this contributed a good deal to the ideas I advanced in my discussion of how the findings of this study might inform the work of instructional designers and technologists in higher education. Of course, the primary focus of this research project was the ways in which the experience of teaching online contributed to instructors’ own conceptions of teaching and their approaches to it in their face-to-face classrooms. I believe that this investigation into the phenomenon of pedagogical change following the experience of teaching online can provide important information and insights to all of us – faculty, instructional designers and technologists, and educational administrators – committed to the advancement of teaching excellence in higher education.
References


GoToMeeting. (n.d.). Retrieved August 31, 2014 from


Kearns, L. R. (2008). Graduate students in higher education: Refocusing the research agenda. *Adult Learning, 17*(1-4), 40-42.


O’Neal, C., Meizlish, D., & Kaplan, M. (2007). Writing a statement of teaching philosophy for the academic job search. Center for Research on Learning and Teaching, University of


Van de Vord, R. & Pogue, K. (2012). Teaching time investment: Does online really take more time than face-to-face? International Review of Research in Open and Distance


Appendix A: Recruitment Email

Dear World Campus Instructor,

If you teach or have taught one or more graduate courses for the World Campus, I would like to invite you to participate in a research project I am conducting about the extent to which teaching online influences teaching in the face-to-face classroom. I am a PhD candidate in the Adult Education Program at Penn State. This research is part of my dissertation work.

I will conduct the study in two phases. This email is requesting your participation in Phase One, which consists of the completion of a short online survey to collect data about how online teaching has influenced your face-to-face teaching. I have included a question in the survey asking if you would be willing to be interviewed during Phase Two of the study. The survey should take about 5 to 10 minutes to complete.

I expect the results of this study to include a better understanding of how the experience of teaching online contributes to faculty professional growth as well as the documentation of the kinds of teaching strategies that have relevance in both online and face-to-face learning environments.

There are no foreseeable risks associated with participating in this project and you will receive no compensation for your participation. Please understand that your participation is voluntary. You have the right to withdraw your consent or discontinue participation at any time. You also have the right to refuse to answer any question(s) for any reason. Your individual privacy will be protected in any and all publications or presentations that may result from this study. No names or identifying data will be used in the final research document or any related materials that might be published. You may request a copy of any published research resulting from this project.

If you have any questions or concerns regarding this project, you may contact me at the email address listed below. Your participation in the survey indicates that you understand the above information, and voluntarily consent to participate in the project. To access the survey, click the following link or cut and paste it into your browser: https://www.surveymonkey.com/s/9YWT73L.

Thank you for your time.

Best regards,
Lorna Kearns
Lorna Kearns, MSIS, is a Ph. D. candidate in Adult Education at the Pennsylvania State University. She works as a Senior Instructional Designer at the University of Pittsburgh and is currently Interim Director of Online Programs at that institution. Her research interests include instructional design for online learning, the experience of teaching online, accessibility issues in online learning, and the transfer of strategies between teaching and learning modalities. Email: lrk143@psu.edu.
Appendix B: Survey

1. How many years have you taught online?
   □ 1-5
   □ 6-10
   □ 11-15
   □ 16-20
   □ More than 20

2. During the period you selected in the previous question, approximately how many course sections have you taught online? (Courses are frequently offered in multiple course sections, either in the same or in different semesters. One feature of a course section is a unique roster of students.)
   □ 1-5
   □ 6-10
   □ 11-15
   □ 16-20
   □ More than 20

3. Do you also teach face-to-face? (If respondent answers “No," branch to end of survey.)
   □ Yes
   □ No

4. How many years have you taught face-to-face?
   □ 1-5
   □ 6-10
   □ 11-15
   □ 16-20
   □ More than 20

5. During the period you selected in the previous question, approximately how many course sections have you taught face-to-face? (Courses are frequently offered in multiple course sections, either in the same or in different semesters. One feature of a course section is a unique roster of students.)
   □ 1-5
   □ 6-10
6. In which of the following World Campus graduate program areas do you teach? Items are identified by topic area and program. Please choose all that apply.

- Business and Management: Business Administration
- Business and Management: Finance
- Business and Management: Human Resources and Employment Relations
- Business and Management: Project Management
- Business and Management: Supply Chain Management
- Education: Adult Education
- Education: Applied Behavior Analysis
- Education: Art Education
- Education: Children’s Literature
- Education: Earth Sciences
- Education: Educational Leadership
- Education: Educational Technology
- Education: Family Literacy
- Education: Special Education
- Education: TESOL
- Energy and Sustainability Studies: Geodesign
- Engineering: Engineering Management
- Engineering: Human Factors Engineering
- Engineering: Mechanical Engineering
- Engineering: Nuclear Engineering
- Engineering: Software Engineering
- Engineering: Systems Engineering
- Geospatial Programs: Geographic Information Systems
- Geospatial Programs: Geospatial Intelligence
- Health Sciences: Geriatric Nursing Education
- Health Sciences: Health Policy and Administration
- Health Sciences: Nursing
- Homeland Security: Public Health Preparedness: Disaster and Bioterrorism
- Information Technology: Enterprise Architecture
- Information Technology: Information Sciences
- Public Administration: Community and Economic Development
- Public Administration: Public Administration
□ Research and Statistics: Applied Statistics
□ Research and Statistics: Institutional Research
□ Turfgrass: Turfgrass Management
□ Other

7. Please indicate which of the following ways the experience of teaching online has had an impact for you. Choose all that apply. (If respondent answers “It has not resulted in any of the changes mentioned above,” branch to end of survey.)

□ It has influenced my assumptions about what constitutes effective teaching.
□ It has influenced my assumptions about how students learn.
□ It has led me to think about introducing new teaching strategies or learning activities into my face-to-face classroom.
□ It has led me to implement new teaching strategies or learning activities in my face-to-face classroom.
□ It has resulted in other changes not mentioned above.
□ It has not resulted in any of the changes mentioned above.

8. If the experience of teaching online has had an impact on your assumptions about effective teaching and/or successful student learning, please provide a brief description.

9. If the experience of teaching online has led you to plan and/or implement a new teaching strategy or learning activity in your face-to-face classroom, please provide a brief description of one such strategy/activity.

10. Has the experience of teaching online resulted in any other changes that you would like to describe?
11. Would you be willing to participate in a 60-90 minute Web-based interview, using Skype or Google Hangouts, about your experience of teaching online and the impact it has had on your beliefs about teaching, plans for face-to-face teaching, and/or teaching strategies you have implemented in your face-to-face classroom? (If respondent answers “No,” branch to end of survey.)

☐ Yes  
☐ No

12. In order to be contacted about your possible participation in Phase Two of this study, please provide your email address.


13. Please confirm your email address.


End of Survey: Thank you for your participation in this survey.
Appendix C: Interview Protocol

I would like to talk with you today about your experience of teaching online. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about how the experience of teaching online may influence instructors’ classroom practices as well as their understandings about teaching and learning.

To facilitate my note-taking, I will be audio-taping our conversation today. The audio file will be password-protected and stored on my personal computer. I will be the only person who has access to the file. I have your consent on file and I have received permission from Penn State’s Office of Research Protections to conduct these interviews. Please be aware that your participation in this interview is voluntary and you may stop at any time. I expect the interview to last between 60 and 90 minutes.

I’d like to start by talking about your teaching background and learn some of your thoughts about effective teaching. Then we’ll move on to talking about student learning and wrap up with how the two modalities compare with one another and how teaching online has influenced your face-to-face teaching.

**Teaching Background**

1. What subjects do you teach?
2. What was your preparation/training for face-to-face teaching? For online teaching?
3. How did you come to teach online?
4. What had been your experience with technology for teaching before teaching online?
5. What experiences have shaped you as a teacher?
6. When you think about effective teaching, what are some of the markers that would help you recognize it? Depending on response, interviewee may be prompted to talk about the following categories:
   a. Course information provided to students, e.g., items on syllabus
   b. Instructional scaffolds provided to students, e.g., exemplars of prior student work
   c. In-class activities, e.g., small group work
   d. Features of assignments, e.g., opportunities to work on authentic tasks
   e. Instructor feedback, including timeliness and targetedness
   f. Solicitation of student input, e.g., mid-course survey
   g. Type and distribution of assessments that contribute to overall grade

7. In your opinion, what are the similarities and differences between face-to-face and online teaching?

8. How has teaching online influenced your thoughts about what constitutes effective teaching?

**Student Learning**

9. Can you talk about how students learn your subjects? What experiences are important for them to have? Depending on response, interviewee may be prompted to talk about following categories:
   a. How does students' prior knowledge affect their learning?
   b. What do you do to influence the way they organize their understanding of your subject matter?
   c. What aspects of your teaching have an impact on student motivation?
   d. How do students develop mastery of complex activities? What do you do to teach component skills that must be integrated into a more comprehensive overall competency?
e. What kinds of practice and feedback enhance learning? How does practice and feedback influence learning?
f. Are there social and emotional aspects of the student’s experience in the course that affect learning?
g. What are examples of learning activities in which students must be self-directed?

10. What helps students to learn?
11. What stops them learning?
12. What is your role in the learning process?
13. What are the similarities and differences for the student between face-to-face and online learning?
14. How has teaching online influenced your thoughts about what constitutes successful learning experiences for students?

**Comparison of Face-to-face and Online Teaching**

15. Describe a face-to-face lesson you teach that you also teach online. Does it work in both modalities?
16. Are there lessons you teach face-to-face that you teach differently online? Perhaps because you think/fear they might be less effective in your online class?

**Impact of Online Teaching on Face-to-Face Teaching**

17. Have you implemented (or considered implementing) a teaching strategy or learning activity in your face-to-face class that you learned from teaching online?
18. Are there any other changes related to your teaching practice that you have experienced as a result of teaching online?
LORNA RICHEY KEARNS
lornakearns@verizon.net

Education
- Ph.D., Adult Education, Pennsylvania State University, 2015
- M.S., Information Science, University of Pittsburgh, 1986
- B.A., Linguistics, University of Pittsburgh, 1978

Employment History
- Director of Online Programs, Center for Instructional Development and Distance Education, University of Pittsburgh, 2013-present
- Instructional Designer, Center for Instructional Development and Distance Education, University of Pittsburgh, 2008-2013
- Adjunct Assistant Professor, Heinz College, Carnegie Mellon University, 1994-2009
- Director, Master of Science in Information Technology Program, Carnegie Mellon University, 2002-2005
- Director, Computing Services, Learning Research and Development Center, University of Pittsburgh, 1989-1993
- User Consultant, Learning Research and Development Center, University of Pittsburgh, 1987-1989
- Systems Analyst, Chancellor’s Office, University of Pittsburgh, 1984-1986

Selected Publications

Selected Presentations
- Golden, C. and Kearns, L. R. (2014, October). Tools and software for online learning. *Invited presentation delivered at the Council of Independent Colleges Consortium for Online Humanities Instruction Regional Workshop, Pittsburgh, PA.*
- Kearns, L. R. (2013, February). Web-based professional learning. *Invited presentation delivered to the Greater Pittsburgh Chapter of the Association for Nursing Professional Development, Pittsburgh, PA.*
- Kearns, L. R. (2011, October). Student assessment in online learning: Challenges and affordances. *Presentation delivered at the 2011 Assessment Institute, Indianapolis, IN.*

Selected Instructional Design Awards