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ACCEPTANCE

This dissertation, ONLINE PROFESSIONAL DEVELOPMENT: AN ANALYSIS OF INSTRUCTOR BELIEFS AND INSTRUCTIONAL STRATEGIES FOR THE FACILITATION OF LEARNING WITH ADULT EDUCATORS, by KATHI L. VANDERBILT, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree Doctor of Philosophy in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chair, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

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Vanderbilt, K. L. (2001a). *Evaluate IT! Elementary teachers evaluating Internet information: An action research project.* Valdosta State University, Valdosta, GA.

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ABSTRACT

ONLINE PROFESSIONAL DEVELOPMENT: AN ANALYSIS OF INSTRUCTOR BELIEFS AND INSTRUCTIONAL STRATEGIES FOR THE FACILITATION OF LEARNING WITH ADULT EDUCATORS

by

Kathi L. Vanderbilt

The purpose of this qualitative case study was to examine the beliefs of 5 experienced instructors about the ways adults learn in online professional development (OPD) courses, beliefs about creating online learning environments, and beliefs about instructional strategies for facilitating adult learning.

The following questions guided this study:

1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?
2. What are the instructor's beliefs about creating an online learning environment for adult learners?
3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

The setting for the study was the professional development program of a large metropolitan school district in the southeastern United States. Data were collected through interviews, discussion board postings, and instructor journals and analyzed using a constant comparative method (Glaser & Strauss, 1967; Strauss & Corbin, 1998).

The following themes emerged from the data:

- Adult learning in OPD courses is an active process of making connections and applying knowledge and skills.
- Learning for adults in OPD courses must be useful, meaningful, relevant, practical, adaptable, and applicable to the work setting.
- Learning for adults in an OPD course requires more effort and commitment than learning in face-to-face professional development settings.
- Adult learners in OPD courses need a comfort zone where they can feel "safe" communicating and interacting with learners and the instructor.
- Adult learners need varying amounts of encouragement, support, guidance, and nurturing within a positive online learning environment (OLE) that supports and sustains them.
- Instructors believe that collaboration is an effective strategy for facilitating learning with adults in OPD courses, yet existing barriers limit collaboration.
- The OPD instructor is a flexible facilitator of learning who uses different types of feedback to confirm, correct, and inform learning with adults.

ONLINE PROFESSIONAL DEVELOPMENT: AN ANALYSIS OF INSTRUCTOR BELIEFS AND INSTRUCTIONAL STRATEGIES FOR THE FACILITATION OF LEARNING WITH ADULT EDUCATORS

by
Kathi L. Vanderbilt

A Dissertation

Presented in Partial Fulfillment of Requirements for the
Degree of
Doctor of Philosophy
in
Instructional Technology
in
the Department of Middle-Secondary Education and Instructional Technology
in
the College of Education
Georgia State University

Atlanta, GA
2008

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ACKNOWLEDGMENTS

There are many people I would like to thank for their supportive help, encouragement and willingness to see me through this journey of completing my doctoral dissertation. First and foremost is my lifelong friend, Kathleen Lyons, who made sure that I received nourishment both physical and spiritual in order to maintain a healthy outlook toward my dissertation. Kathleen helped establish and focus my vision enabling me to see the possibilities of life beyond my current horizons.

Thanks to Dr. Mary B. Shoffner, my advisor, who worked with me to make sure that this dissertation was a good work, worthy of my pride. Dr. Nancy J. Brown kept me going with humorous interventions and prompted me with questions upon questions that served to bring me closer to the study I sought to conduct. Dr. Dana L. Fox helped me visualize new techniques for conducting interviews and taught me to be scrupulous with journaling so that I could faithfully recount my story. Dr. Wanjira Kinuthia added persistence to the mix and endeavored to keep me following the right track.

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ABBREVIATIONS

KCSD	King County School District (pseudonym)
OLE	Online Learning Environment
OPD	Online Professional Development
PLC	Professional Learning Community
PLU	Professional Learning Unit
LMS	Learning Management System
NICI	National Institute for Community Innovations
NSDC	National Staff Development Council
SDL	Self-Directed Learning

CHAPTER 1

INTRODUCTION

Professional development programs have been described as disconnected from practice, fragmented, and misaligned (Schlager & Fusco, 2003). Approaches to professional development, such as the deficiency model and the "one shot approach," provide examples of disconnection and fragmentation. The deficiency model of professional development viewed educators as lacking skill or "deficient." Through participation in professional development activities educators learn new skills and knowledge to correct deficiencies (Guskey, 2000; Smylie, Allensworth, Greenberg, Harris, & Luppescu, 2001). For many teachers, professional development consists of a passive process of listening to an expert in a one day workshop and is often called a "one shot approach" (Boyle, While & Boyle, 2004). While attending short workshops may develop teacher interest in learning, it is not sufficient to impact teacher practice. Effective professional development is an intentional, ongoing, and systemic process to bring about positive change and improvement (Guskey, 2000). The development of learning communities provides opportunities for ongoing professional learning focused on the continuous improvement of teaching and student learning (National Staff Development Council [NSDC], 2001).

Problem Statement

Online professional development is a relatively recent innovation in many K-12 school districts. The NSDC and the National Institute for Community Innovations (NICI)

together indicated the importance of supporting adult learners in online learning environments (OLEs) and organizing adult learners in learning communities (NSDC & NICI, 2001). Because the purpose of face-to-face and online professional development is to increase student achievement, the standards apply to both settings. Context standards call for moving beyond the acquisition of knowledge and skills to develop a collaborative learning community that is able to apply newly learned concepts. The standards recognize that online instructors of adult learners will require "specialized training in designing, teaching, and facilitating e-learning" (NSDC & NICI, p. 5). In addition, online learners will need a supportive learning environment, active engagement, and opportunities to apply new learning in real-life contexts.

To support adult learners in OPD, skillful instructors are necessary (NSDC & NICI, 2001). While many studies have investigated the competencies and characteristics of online instructors (Anderson, Rourke, Garrison & Archer, 2001; Jetton, 2004; Joy, 2004; Many, Wallace, Stephenson & Eicholdt, 2004; Salmon, 2002) and the skills and competencies needed to shift from face-to-face instruction to online instruction (Bennett & Lockyer, 2004; Easton, 2003; Fein & Logan, 2003), there are few studies that examine online instruction in the context of adult learning theory (Joy, 2004) or through the perspective of the instructor's beliefs (Nkonge, 2004). While the literature about online teaching and learning has rapidly expanded, there is an identifiable gap in the literature regarding the examination of the beliefs of the instructor and the ways that beliefs influence adult learning in an online setting.

Self-directed learning (SDL) is an important goal in adult learning theory (Brockett & Hiemstra, 1991; Brookfield, 1986; Candy, 1991). The term SDL has been

used to describe the personal attributes of the learner, learner self-management, a method of organizing formal instruction, and a process of engaging in informal learning opportunities (Candy, 1991). Through the process of conceptualizing SDL for adult learners, Knowles' (1975) personal view of the role of the instructor as a knowledge transmitter shifted to a view of the role of the instructor as a facilitator of learning. Skills and abilities for SDL vary among adult learners (Knowles, 1984a), yet instructors can support the development of SDL skills based on the needs of learners (Lee & Gibson, 2003).

Connecting the rich life experiences of adults within the learning environment will provide opportunities for adult learners to contribute experiential learning to the learning community (Knowles, 1975). Problem based learning and inquiry learning opportunities allow adult learners to think, reflect, and try out various solutions. Adults want professional development to relate to their immediate needs. The learning environment is also important to adult learners. The learning climate should encourage a safe, informal, friendly atmosphere with a climate of acceptance, support and respect that encourages a spirit of joint inquiry and freedom of expression.

Additionally, it is important to examine how instructor beliefs influence instruction. Instructor beliefs incorporate implicit assumptions about teaching, learning, learners, learning environment, and instructional content (Kagan, 1992). Beliefs influence instructional decision making and instructional practice (Kagan, 1992; Pajares, 1992). Instructor beliefs influence the use of instructional strategies to facilitate learning with adults. Pajares noted that beliefs are self-perpetuating and resistant to change even when faced with contradictions resulting from schooling or experience. Beliefs influence

perception, shape knowledge, and influence behavior. Each instructor's beliefs about the use of instructional strategies to facilitate learning with adults in an online environment reveal rich insights unique to the individual and to the online instructional context. The descriptive narrative from each instructor participant is woven into a bricolage (Denzin & Lincoln, 2005). The researcher as a "bricoleur" weaves together the pieces of the story into a rich, unique tapestry representing beliefs, ways of developing and sustaining OLEs, and instructional strategies to support the learning of adults within the framework of adult learning theory.

Purpose of the Study

This study is based on the premise that online professional development can be an effective tool to help K-12 educators improve their teaching practice. Three learning theories/theoretical frameworks, behaviorism, cognitivism, and constructivism, have been woven into the fabric of teaching and learning in K-12 environments. Each theoretical framework examines the way that learning occurs, the factors that influence learning, the role of memory, how learning is transferred, and what types of learning work best (Schunk, 1996). Although there are similarities, differences, and overlapping parts of the frameworks, the instructional strategies congruent with each theory may be similar even though the terminology used to describe the strategies may be different. Some researchers feel that it is important to select the instructional strategy that best suits the learning need or solves the learning problem even when the instructional strategies are based on more than one theoretical framework (Ertmer & Newby, 1993; Johnson & Aragon, 2003; Morrone & Tarr, 2005; Snelbecker, 1987). Others may prefer to use instructional

strategies aligned with only one learning theory (Bednar, Cunningham, Duffy, & Perry, 1991).

In addition to considering these theoretical frameworks and the types of instructional strategies that arise from them, it is important to examine the influence of adult learning theory in an online environment. Examining the beliefs of the OPD instructor reveals rich insights about instructor approaches to online teaching and learning with adult learners, including the processes of creating OLEs and the selection of instructional strategies. Instructor beliefs about learning have implications for the techniques and strategies used to facilitate learning (Ertmer & Newby, 1993). The purpose of this qualitative case study was to examine instructor beliefs about the ways adults learn in OPD courses, instructor beliefs about creating OLEs for adult learners, and instructor beliefs about instructional strategies used to facilitate online learning with adults.

Guiding Questions

The following questions guided this study:

1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?
2. What are the instructor's beliefs about creating an online learning environment for adult learners?
3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Theoretical Framework

Knowles (1980a) defined andragogy as the "art and science of helping adults learn" (p. 43). Andragogy stems from the Greek word *andr*, which means male or man,

and the Greek word *agogus*, which means leading (Knowles, 1980a; 1984a). This study is guided by the following assumptions from andragogy: Adults have a need to be self-directing in learning; adults bring a wealth of experiences that contribute to their own learning and the learning of others; readiness to learn is related to real-life need such as in the roles and responsibilities of an adult in society; adults are life-centered learners and want learning to relate to real world contexts such as problem solving and adult learners are guided by intrinsic motivation such as increased self-esteem (Feuer & Geber, 1988; Knowles, 1968, 1984a; Merriam, 2001). Initially andragogy was designed to differentiate the instruction of adults from the instruction of children (called pedagogy) and was based on a different set of assumptions (Knowles, 1970). Later Knowles began to view pedagogy to andragogy as a continuum for human learning with learners at different points in the continuum at different times.

This study is also guided by Knowles's (1984b) description of an adult learning climate featuring an informal friendly atmosphere; a climate of acceptance, support, and respect; and freedom of expression, and acceptance of differences. Knowles (1975) viewed the adult learner as an active participant in the learning process. The role of the instructor shifted from a role of a knowledge transmission to the role of a knowledge facilitation. In the role of a facilitator, the instructor manages the processes and procedures that assist learners with knowledge acquisition. The instructor also serves as one of many content resources (Knowles, 1984b).

The framework of this study also rests on the construct of beliefs, in particular the conception of the instructor's educational beliefs about online teaching and learning with adults. Pajares (1992) suggested that "all teachers hold beliefs, however defined and

labeled, about their work, their students, their subject matter, and their roles and responsibilities" (p. 314). For the purposes of this study, beliefs are defined as implicit assumptions about teaching, learning, learners, learning environment, and instructional content (Kagan, 1992). Pajares conceptualized beliefs as implicit and inferred and noted the difficulty of observing and measuring beliefs. The theoretical assumptions for this study are based on Pajares (1992) synthesis of the educational research on teacher beliefs:

1. The belief system has an adaptive function in helping individuals define and understand the world and themselves.
2. Knowledge and beliefs are inextricably intertwined, but the potent affective, evaluative, and episodic nature of beliefs makes them a filter through which new phenomena are interpreted.
3. Belief substructures, such as educational beliefs, must be understood in terms of their connections not only to each other but also to other, perhaps more central, beliefs in the system. Psychologists usually refer to these substructures as attitudes and values.
4. Beliefs are instrumental in defining tasks and selecting cognitive tools with which to interpret, plan and make decisions regarding such tasks; hence, they play a critical role in defining behavior and organizing knowledge and information.
5. Individuals' beliefs strongly affect their behavior.
6. Beliefs must be inferred, and this inference must take into account the congruence among individuals' belief statements, the intentionality to behave in a predisposed manner, and the behavior related to the belief in question. (pp. 324-326)

The importance of studying beliefs is noted in educational belief research. The theoretical foundation of this study rests upon the premise that beliefs affect behavior and behavior affects the ways that instructors work with adults in online teaching and learning.

Significance of the Study

Online learning fulfills many needs and provides opportunities for educator professional development. Even though OPD is a young field, the potential to extend learning beyond physical classrooms and school buildings is just being realized. While many studies have examined online learning with adult graduate students, there are few

studies that have examined the beliefs of OPD instructors in the K-12 environment related to adult online learning. An in-depth examination of the OPD instructor's beliefs about adult learning, OLEs, and the use of instructional strategies to facilitate the learning of adult, in-service educators will inform the field of adult online learning, have implications for the training of online instructors, and for the design, development, implementation, and evaluation of OPD courses. I hope that this study will contribute to the successful facilitation of online learning with adults and provide a better understanding of OLEs conducive to adult learning.

Limitations of the Study

I chose case study methodology to provide a thorough description of the context and participants. As a result, findings from the study are unique to the setting and context. I used thick description so that readers can decide for themselves if the context of this study is similar enough to generalize the results to another setting. Nine OPD instructors, who taught a course during the summer semester of 2006, in the King County School District (pseudonym), were purposefully selected as "experienced instructors" and invited to participate in the study. Only experienced instructors were invited to participate in the study to help me understand the research problem (Creswell, 2003). The list of all King County OPD instructors was narrowed to a pool of nine experienced instructors. An instructor who had previously taught the same course on at least one prior occasion was considered "experienced." Out of the pool of nine experienced instructors, five OPD instructors volunteered to participate and joined the study. This study was limited by the small pool of potential participants, the need for voluntarily agreement to participate in

the study, and by the further reduction of potential participants that met the criteria for purposeful selection (experience as an OPD instructor).

Researcher Bias

I worked in the King County School District where the study took place, and I was acquainted with the participants before the study began. I had participated in the co-development and teaching of an OPD course for the district and had previously served as a school representative on a district administrative team that considered policies affecting online instruction. Members of this administrative team were active in planning online instruction for K-12 students and also for adult learners. The relationships I developed while participating in course development, serving as an instructor, and working on the district administrative team helped me build professional, collegial relationships with other adults who were also interested in online teaching and learning. This helped me gain access to participants and OPD staff members in the school district. To minimize bias, I kept electronic notes and a handwritten journal, and I met with a peer debriefer to discuss the data. Discussions with the peer debriefer focused on keeping a bias-free perspective on the participants in efforts to maintain neutrality. The use of probing questions from the peer debriefer encouraged me to consider different viewpoints and understand all of the possible meanings embedded within the data.

Terms and Definitions

Adult. Knowles (1984a) suggested four definitions of adult including a biological definition, a legal definition, a social definition, and a psychological definition. For the purposes of this study, an adult is defined in an organizational context as an employee of the school district.

Andragogy. The "art and science of helping adults learn" (Knowles, 1984a, p. 52).

Asynchronous learning. Learning that occurs at different times and learners may participate at the time of their choosing (Abramson & Ellis, 2000).

Beliefs of instructor. Implicit assumptions about teaching, learning, learners, learning environment, and instructional content (Kagan, 1992).

Blended learning strategy. Combining online learning with a limited number of face-to-face meetings (Ausburn, 2004).

Bricolage. Bricolage is a French term without an exact English translation (Louridas, 1999). It has been defined as the "creation of structure out of events" (p. 522) while the researcher as "bricoleur" works with concrete and abstract objects, concepts and images through dialog and reorganizes them.

Discourse. The Merriam-Webster Online Dictionary (n.d.) defines *discourse* as "formal and orderly and usually extended expression of thought on a subject." For the purposes of this study the words discussion and discourse will be used interchangeably.

Emoticons. Keyboard characters used to represent emotions or affect or to add emphasis (Swan, 2002). For example :) is a happy smiley face.

Epistemology. Epistemology is the study of beliefs about knowledge and knowing held by an individual (Hofer & Pintrich, 2002).

Hybrid course. In a hybrid course, learners meet in a face-to-face (FTF) class-room and in an online environment (El Mansour & Mupinga, 2007)**.** A hybrid course is similar to a blended course or a course using a blended learning strategy.

Instructional strategy. Instructional strategies are the means, processes and procedures used to encourage and promote learning. Instructional strategies can be

described as a plan of learning activities designed to help the learner reach an instructional goal (Dick & Carey, 1996)

Learning community. For the purposes of the proposed study a learning community will be defined as a supportive OLE for educators interested in developing collegial relationships to support the development of expertise in teaching and learning and to improve teaching practice and student learning (Song, 2005).

Learning management system. The learning management system (LMS) is the computer-based software platform that supports an online course and typically includes communication tools like chat rooms, discussion boards, learning units, announcements, and email (e.g., Blackboard Academic Suite™) (Naidu, 2008).

Online course. A course that takes place using the Internet or computer networks (Harasim, 2000).

Online professional development. Professional development that takes place via the Internet or computer networks (NSDC & NICI, 2001).

Professional development. The terms professional development, staff development and in-service education are used interchangeably. Professional development is defined as a process for educators to acquire or change skills, attitudes, and beliefs to improve student learning (NSDC, 2001).

Professional learning community. A supportive OLE for educators interested in improving their expertise in teaching and learning and to improve teaching practice and student learning (DuFour & Eaker, 1998).

Self-direction in learning. Self-direction in learning is a process of learner responsibility to plan, implement and evaluate the learner's own learning (Brockett & Hiemstra, 1991).

Self-directed learning. Self-directed learning has been described as a process of organizing instruction (Brockett & Hiemstra, 1991; Candy, 1991), as personal attributes that are influenced by a learner's attitudes, values, and beliefs (Guglielmino, 1977), as a process of conducting informal, independent, self-learning projects, and as a process that involves learner control of learning (Candy, 1991). Knowles (1975) described SDL as learner's self-evaluative process of determining their learning need, developing learning goals, identifying resources, and implementing and evaluating learning results.

CHAPTER 2

REVIEW OF THE LITERATURE

This literature review provides a foundation for this case study investigation of instructor beliefs about adult learning in OLEs. In it, I examine the following topics: professional development, online professional development, instructor beliefs, learning theories, adult learning theories, online instructor skills, online instructional strategies, concerns for online instructors, and professional learning communities. Each topic is discussed in sequence and the essential points of each topic are summarized at the end of the section.

The purpose of this qualitative case study was to explore the beliefs of five individual instructors about adult learning online, creating OLEs, and instructional strategies used to facilitate online learning with adults. The setting for the study is the King County School District (KSCD), a large public school district responsible for educating over 106,000 diverse K-12 students in over 100 different schools. KSCD has over 14,000 employees and supports the professional development of 8,700 certified personnel and 1,500 paraprofessionals. Participants in this study were OPD instructors who taught an online course for adult employees of the school district during the summer of 2006.

The literature review begins with an examination of professional development, moves to a description of online professional development, and discusses the benefits and barriers of online professional development. In the next section, I examine instructor

beliefs and explore the methodological issues involved in discerning and understanding beliefs.

Learning theories are important to review because instructor beliefs about learning have implications for the techniques and strategies used to facilitate learning (Ertmer & Newby, 1993). Instructor beliefs about the ways that adults learn may be influenced by adult learning theory and will also have implications for the use of instructional strategies for facilitating learning with adults. Instructor practices for facilitating online learning with adults will explore instructor skills. In the section on concerns for online instructors, I delve into issues such as creating and sustaining interaction in OLEs, facilitating online discussions, and managing instruction in online environments. In the final section, I investigate the role of the instructor in the development of a professional learning community and explore the ways that the interaction between the instructor and the professional learning community shapes instruction.

Each of the topics explored in this literature review has a connection with the questions that guide this study. Exploring the influence of instructor beliefs about the ways adults learn online, the techniques and strategies for building an OLE for adult learners, and the use of instructional strategies will contribute to research and practice in regard to facilitating learning with adults in OPD courses.

Professional Development

There are many different terms used to describe professional development: in-service education, in-service training, staff development, and professional learning (Sparks & Hirsh, 1997). While the terms are often used interchangeably (NSDC, 2007; Sparks & Hirsh, 1997), some audiences associate different meanings with the terms. For

the purposes of this literature review, the terms in-service, staff development, and professional development will be used interchangeably. In this section of the literature review, I examine the history, purpose, and models of professional development and conclude with an examination of the criticisms of professional development along with a discussion of effective professional development practice.

To understand current trends in professional development, it is helpful to examine trends from the history of professional development. In-service education or in-service training is not a new idea. It began about 1850 with the purpose of helping teachers improve (Corey, 1957). During the 1850s, many teachers were untrained and had little knowledge of subject matter (Richey, 1957). In-service training programs were designed to help inexperienced teachers attain knowledge and skills (Corey, 1957; Richey, 1957). In the 19th and early 20th centuries, teachers were considered to be poorly educated and "deficient" in teaching skills, and in-service education focused on large group instruction at teacher institutes with the purpose of correcting teacher deficiencies (Corey, 1957; Richey, 1957).

Teacher institutes were directed towards the teaching of content and subject matter (Richey, 1957). Later topics included teaching methods and classroom management. Instructional delivery methods for teacher institutes included lectures, inspirational speakers, and motivational speakers. As teacher access to academic training options improved, teacher institutes fell out of favor and were criticized for not meeting the needs of teachers and schools (McManis, 1903). Institutes were accused of rehashing content considered of little value to teachers and for doling out passive "pedagogical pablum" while the pedagogy of the time called for active learning. McManis termed the institute a

"fossil" and suggested that the needs and questions of teachers should be the starting point for creating and implementing training experiences. McManis asserted that the material presented at institutes needed to be studied for an entire year to allow teachers time to examine their own questions in regard to the training.

A shift toward the use of workshops occurred in the late 1930s (Corey, 1957). New ideas about human motivation and learning led to a transition in beliefs about the main purpose of in-service programs. While earlier beliefs focused on correcting individual problems, new conceptions of in-service programs moved towards generating cooperative, problem solving approaches to instruction (Corey, 1957). Hass (1957) described in-service education as the activities that educational professionals participate in that lead to continuous on-the-job improvements. In-service education was expected to provide assistance to new educators as they learn the profession, to help educators eliminate deficiencies, to assist educators with understanding a rapidly expanding knowledge base, and to promote the development of common values among educators.

The in-service needs of educators in the 1950s were linked to gaining subject knowledge and increasing expertise in teaching methods (Hass, 1957). Educators were expected to adapt their teaching to match the needs of individual students and to increase their own personal skills and abilities for working co-operatively with colleagues. Therefore, in-service education was expected to assist educators in developing skills and knowledge to address the individual needs of learners (Hass, 1957) and to modify the behavior and attitudes of educators (Corey, 1957).

The 1960s were influenced by faster modes of travel and increased speed of communication (Moffitt, 1963). There were increased concerns about science and

mathematics instruction and demands for curriculum revision. The use of films, tape recorders, and television added a new layer of complexity to teacher learning. Teachers were faced with rapid change and innovation. While some teachers embraced change, others fought against it. Complexity and rapid change in schools in the 1980s led to a shift from the view of individual teachers needing specific skills toward a view of groups of educators working collaboratively to meet the demands of accelerated change (Fenstermacher & Berliner, 1985).

In contemporary practice, professional development involves relevant formal and informal learning opportunities for educators (Fullan, 1995). Professional development has been described as a process for educators to acquire or change skills, attitudes, and beliefs to improve student learning (Fenstermacher & Berliner, 1985; Griffin, 1983; Guskey, 1986; NSDC, 2001). Professional development is often linked with school reform (Guskey, 2000; Sparks & Hirsh, 1997) and educational change (Boyle, While, & Boyle, 2004; Butler, Novak, Beckingham, Jarvis, & Elaschuk, 2001).

Effective professional development has been described as systematic and sustained (Garet, Porter, Desimone, Birman, & Yoon, 2001; Griffin, 1983). It includes the development of organizations (Sparks, 1994; Sparks & Hirsch, 1997) and learning communities (Loucks-Horsley, 1995; NSDC, 2001). Although there are many research based lists describing the characteristics of effective professional development, Guskey (2003) argues that the list content is inconsistent and contradictory, noting that there is little agreement about the criteria for effective professional development. The effectiveness of professional development is often measured by self-reports of teacher participants instead of by examining improvements in student learning (Garet et al., 2001;

Guskey, 2003; Sparks & Hirsch, 1997). Sparks and Hirsch describe the self-reporting evaluation method as the "happiness quotient" and believe that professional development must move beyond fragmented approaches towards a strategically planned, widespread, and sustained approach to professional development that promotes change in the skills and attitudes of individuals while impacting organizational cultures and structures.

Porter, Garet, Desimone, Yoon, and Birman (2000) offer a contrasting view that a consensus about the characteristics of effective professional development does exist. Based on a probability survey of over 1,000 teachers and an analysis of the literature on effective professional development, Birman, Desimone, Porter and Garet (2001) proposed six components of effective professional development: form, duration, participation, content focus, active learning, and coherence. Findings from this study indicated that effective professional development should focus on active learning opportunities of longer time duration to help teachers improve content knowledge and to develop better understandings of the ways that students learn content.

Sparks and Loucks-Horsley (1989) reported five models of staff development: the individually guided model, the observation/feedback model, the development/improvement process, the training model, and the inquiry model. The individually guided model of staff development is designed, directed, and implemented by the individual and is based on the assumption that the individual can best determine and implement their own professional learning. The observation/feedback model includes peer coaching and supervision and is often associated with teacher evaluation. The observation/feedback model is based on the premise that educators involved with the development/improvement process in curriculum or school improvement measures can learn professionally

through developing and implementing plans and programs to improve learning. The training model focuses on teaching specific learning objectives and outcomes. Trainers select the content and activities to teach. This model is based on the conception that learners will return to their classroom and implement newly learned behaviors and skills. The inquiry model may be conducted individually or in small or large groups and is implemented through the exploration of a problem of interest followed by potential solutions to the problem.

From the beginning of professional development when the purpose of professional development focused on correcting the deficiencies of teachers (Corey, 1957; Richey, 1957) to current views and models of professional development, many of the issues and concerns about professional development have remained the same. The complaints leveled against the teacher institutes could pass for criticisms of current professional development practices. Professional development is still criticized for being used to correct the deficiencies of teachers and for being fragmented, disconnected, and misaligned (Schlager & Fusco, 2003).

Online Professional Development

The purpose of professional development is to improve teaching and student learning thus increasing student achievement (NSDC, 2001). Online professional development uses a variety of technologies to deliver instruction online via the Internet (Killion, 2000a). OPD can provide “anytime, anywhere” training opportunities that can be offered at the time needed by learners (NSDC & NICI, 2001). Content can be easily updated, customized, adapted, and reused (Ally, 2004). OPD opportunities can be designed to meet the needs of small, isolated groups of learners who might not have

access to job specific training, such as the only school library media specialist or the only chemistry teacher in a school (Killion, 2000a). OPD can equalize the playing field among learners by providing opportunities for each learner to have a voice. Learners who are shy or reserved in a face-to-face environment may open up in an online setting (Bonk, Wisher, & Lee, 2004). OPD can provide access to courses for people with physical disabilities and provide increased flexibility for instructors and learners (Schulte, 2003). Flexible delivery options include learning place and time and may cross geographical boundaries and cultures (Johnson, 2005). Asynchronous activities do not require learners to be logged into a course at the same time, thus allowing learners the freedom to schedule their learning time and to choose the amount of time to spend on each session (Killion, 2000a). OPD may allow adult learners who have additional social responsibilities, such as caring for dependent family members, the flexibility needed to participate in learning opportunities (Hodson, Connolly, & Saunders, 2001).

Online professional development provides support structures for learners with discussion groups, seminars, study groups, access to experts and mentors, chats, electronic mailing lists, and streamed video (Bonk et al., 2004; Killion, 2000b; Schulte, 2003). Online discussion forums provide access to archived discussion postings for reflective analysis (Browne, 2003). Learners have time to think, reflect, and write prior to posting a message. Afterwards they may revisit and revise their ideas and conceptions (Bonk et al.; Killion 2000a; Schulte, 2003).

In addition to the benefits of OPD, it is also important to consider the potential barriers to learning with OPD. One concern of online instructors is the technical ability of learners (Berge, Muilenburg, & Haneghan, 2002; McIsaac, Blocher, Mahes, & Vrasidas,

1999). Online instructors may spend valuable time teaching basic technical skills (Chizmar & Williams, 1997). Yet, in one study, when learners with poor technical skills were provided support from a coach, the difference in interaction between learners with good technical skills and learners with poor technical skills was marginal (Ross, 1996). Instructors may also be concerned with the availability of technical support for learners. Online instructors working in organizations with available support structures perceive fewer barriers to distance education (Berge, 2002a; Berge et al., 2002). Instructors may also experience technical issues and difficulty using technology tools to manage online instruction (Duncan, 2005; Maor & Zariski, 2003). Centralized technical support provides support to learners and instructors (Chizmar & Williams, 1997).

The lack of immediate feedback has been cited as a problem for online learners (Hara & Kling, 2000; McIsaac et al., 1999; Vonderwell, 2003). For the OPD instructor, striking a balance between providing ample feedback and not overwhelming the learner or dominating the discussion is important (Palloff & Pratt, 2003). Other difficulties arise in the online environment where there is a lack of non-verbal and visual cues such as the lack of facial expressions, body language, and voice inflection (McIsaac et al., 1999). Additional concerns for OPD instructors will be explored later in this review. Table 1 provides a summary of the benefits and barriers of OPD.

Instructor Beliefs

Pajares (1992) believes that research on teacher beliefs is necessary and valuable. In a meta-analysis of educational research on teacher beliefs, Pajares described a strong connection between teachers' educational beliefs and their instructional

Table 1

Online Professional Development Benefits and Barriers

Benefits	Anytime, anywhere training, content easily updated and matched to learner need (Ally, 2004; NSDC & NICI, 2004)
	Encourage learner's voice (Bonk et al., 2004; Killion, 2000a)
	Access to online instruction for people with physical disabilities (Schulte, 2003)
	Flexible delivery gives adult learners more options (Hodson et al., 2001; Killion, 2000a; Schulte)
	Support structures include discussion groups, seminars, study groups, access to experts and mentors, chats, electronic mailing lists and streamed video (Bonk et al.; Killion, 2000a; Schulte)
	Provides time for reflection so that learner can reflect, write, revise and revisit content (Bonk et al.; Killion, 2000b; Schulte)
Barriers	Technical ability of learners (Berge, et al., 2002; Hara & Kling, 2000; McIsaac et al., 1999)
	OPD instructors may spend time teaching basic technical skills (Chizmar & Williams, 1997; Duncan, 2005)
	Technical skills may not affect the level of learner interaction (Ross, 1996)
	Organizations with well developed distance learning programs may incorporate technical support (Berge, 2002a; Berge et al., 2002)
	Lack of infrastructure to provide technical support for instructors and learners (Chizmar & Williams)
	Lack of immediate feedback and lack of non-verbal and visual cues (Hara & Kling, 2000; McIsaac et al., 1999)

practices. Although the topic of teacher [instructor] beliefs has been explored frequently in educational research, there is little agreement on an exact definition of the term *beliefs* (Ertmer, 2005; Kagan, 1992; Pajares, 1992). Kagan defined teacher beliefs as tacit assumptions about teaching, learning, learners, and the educational setting. Calderhead

(1996) noted the difficulty of distinguishing between the terms *knowledge* and *beliefs*. While *beliefs* refer to suppositions, conjectures, and guiding principles, *knowledge* refers to verifiable, factual information, and understandings.

Kagan (1992) noted that researchers use a variety of different terms to explore beliefs, such as principles of practice, personal epistemologies, perspectives, practical knowledge, and orientations. Pajares (1992) described the process of defining *beliefs* as a game of "players choice," noting that *beliefs* may also be called "attitudes, values, judgments, axioms, opinions, ideology, perceptions, conceptions, conceptual systems, preconceptions, dispositions, implicit theories, explicit theories, internal mental processes, action strategies, rules of practice, practical principles, perspectives, repertories of understanding, and social strategy" (p. 309).

In addition to considering a definition of beliefs, it is also important to consider the process of placing beliefs into action. While some studies support the idea that instructor beliefs relate to teaching practice (e.g., Richardson, Anders, Tidwell, & Lloyd, 1991), other studies report inconsistencies between beliefs that are held and beliefs in action (Fang, 1996). Inconsistencies between stated beliefs and beliefs in action may stem from the constraints, complexities, and the context of the instructional setting and from problems associated with the study of educational beliefs. Beliefs are difficult to define, measure, and study. Problems with the study of beliefs have been noted with research study design (Pajares, 1992). The difficulties with measuring beliefs may contribute to inconsistencies and problems with moving from espoused beliefs to beliefs implemented in practice.

Learning Theories

In addition to examining beliefs, it is also important to understand how learning theories influence instructor beliefs. There are many different definitions of the term *learning* as well as a variety of theories used to explain each definition. Schunk (1996) defines learning as "the acquisition and modification of knowledge, skills, strategies, beliefs, attitudes and behaviors. Learning involves cognitive, linguistic, motor and social skills and can take many forms" (p. 2). Shuell (1986) describes learning as an enduring change in the behavior or ability of an individual that results from practice or experience. Carlile and Jordan (2005) assert that a person's theoretical stance will determine their definition of learning. For example, a behaviorist would define learning as a change in behavior. According to the Merriam-Webster Online Dictionary (n.d.), *learn* can be defined as "to gain knowledge or understanding of or skill in by study, instruction, or experience" and *theory* can be defined as "a belief, policy, or procedure proposed or followed as the basis of action." Schunk (2004) defined *theory* as a set of principles used to explain an event or occurrence.

Educator beliefs about learning and the way learning is defined have implications for the techniques and strategies used to facilitate learning (Ertmer & Newby, 1993). Therefore, it is important to examine learning theories and how learning theories influence instruction. This section on learning theories provides a brief overview of behavioral learning theory, cognitive learning theory, and constructivist learning theory and concludes with a brief discussion of two distinct approaches for using learning theories in instruction.

Understanding and exploring the beliefs, perspectives, and influences of a variety of learning theories help to understand the ways that instructor beliefs may be influenced or shaped by learning theories. This reflects on one of the main questions that guide this study: What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Ertmer and Newby (1993) proposed a rationale for having a thorough knowledge of learning theories:

> First, learning theories are a source of verified instructional strategies, tactics and techniques . . . Second, learning theories provide the foundation for intelligent and reasoned strategy selection . . . Third, integration of the selected strategy within the instructional context is of critical importance (p. 51).

Schunk (1996) examined learning theories by asking the following questions: How does learning occur? Which factors influence learning? What is the role of memory? What is the role of motivation? How does transfer occur? And which types of learning does the theory best explain? In contrast, Ertmer and Newby ask how instruction should be structured to facilitate learning. Table 2 uses these guiding questions to provide a brief synthesis of learning theories from three perspectives: behaviorism, cognitivism, and constructivism.

Behaviorism and cognitive information processing share objectivist epistemologies and focus on the process of knowledge transmission (Bednar et al., 1991). Objectivists suggest that knowledge is stable and different learners will gain the same understanding from knowledge transmission (Jonassen, 1991a). Shuell (1986) examined the shift from behaviorism to cognitivism and noted changes in the perception of learners as they moved from being passive learners focused on changes in behavior to active

Table 2

Identifying the Perspectives of Learning Theories

Question	Behavioral Theory	Cognitive Theory	Constructivist Theory
How does learning occur?	Observable "proper" response following a stimulus (Ertmer & Newby, 1993) Observable change in behavior (Carlile & Jordan, 2005) Knowledge is independent (outside) of the learner (Bednar et al., 1991)	Learner mentally organizes and stores information (Ertmer & Newby, 1993; Jonassen, 1991b) Learner develops thinking strategies (Carlile & Jordan, 2005)	Learner constructs knowledge (Carlile & Jordan, 2005) Learners create personal understanding (Bednar et al., 1991) Social context (Schunk, 2004)
Which factors influence learning?	Learner and environmental factors (Ertmer & Newby, 1993) Reinforcement (Jonassen, 1991b)	Learner (code, transform, rehearse, store and retrieve information), environmental factors, and corrective feedback (Ertmer & Newby, 1993) Metacognition (Shuell, 1986; Svinicki, 1999)	Learning results from the interaction of the learner in the learning environment (Jonassen, 1991b)
What is the role of memory?	Memory results from habit patterns (Ertmer & Newby, 1993; Schunk, 1996)	Learning results when information is stored in a meaningful way (Ertmer & Newby, 1993)	Interpretation and elaboration of information, memories examined and reconstructed (Ertmer & Newby, 1993)
What is the role of motivation?	Increase probability of behavior in response to stimuli (Schunk, 1996)	Direct learner attention; influence information processing (Schunk, 1996)	Personal and contextual factors influence motivation; implicit theories about learning, and teacher's expectations are influential on motivation (Schunk, 2004)

(Table continues)

Question	Behavioral Theory	Cognitive Theory	Constructivist Theory
How does transfer occur?	Behaviors generalize to events that share commonalities (Schunk, 1996)	When learning can be applied in different contexts then transfer has occurred (Ertmer & Newby, 1993)	Through authentic tasks in meaningful contexts (Ertmer & Newby, 1993)
Which types of learning does the theory best explain?	Simpler forms of learning that involve associations (Schunk, 1996)	Complex forms of learning such as information-processing, memory networks, learner perceptions, and interpretations (Schunk, 1996)	Content and context of learning determine the best type of learning (Ertmer & Newby, 1993) Solving ill-structured problems (Jonassen, 1991b)
How should instruction be structured to facilitate learning?	Facilitate the linking of stimulus-response by determining strategies, arranging practice and providing reinforcement; pre-assessment of learner to determine where learning should begin; analyze target behaviors and organize instruction into small, discrete steps (Ertmer & Newby, 1993)	Meaningful arrangement to help learners organize and relate new information to existing knowledge structures, (analogies and metaphors), highlighting important ideas, advance organizers, concept maps, outlining and mnemonics (Ertmer & Newby, 1993; Svinicki, 1999)	Active application of ideas to solve problems (Ertmer & Newby, 1993) Social interaction with peers (Morrone & Tarr, 2005) Support through scaffolding (Carlile & Jordan, 2005) Modeling, coaching and collaboration Bednar et al., 1991)

learners focused on the mental activities of engaging in information processing and solving problems. Constructivists propose that knowledge is constructed in the experiences, mental structures, and interpretations of the learner. Ertmer and Newby (1993) hold the view that learning occurs along a behaviorist, cognitivist, and constructivist continuum. A shift in instruction occurs along the learning continuum as the purpose of instruction moves from the passive transfer of knowledge to active

problem solving and the application of new learning. Rather than focusing on choosing one specific, best theory, Ertmer and Newby are advocates for developing a thorough knowledge of all theories and making instructional choices based on the theory or theories that will best help the learner master specific tasks. According to Ertmer and Newby, the choice of a theory is dependent on where the learner falls in the continuum. For example, if the learner lacks mastery of basic content knowledge, then behavioral strategies might be the best choice. The demands of the learning task and the competence level of the learner will also influence the choice of instructional methods and learning theory.

While some instructors may select instructional strategies matched to a specific learning theory, such as constructivist theory, others recommend an eclectic approach that combines instructional strategies from different learning theories (Ertmer & Newby, 1993; Johnson & Aragon, 2003; Morrone & Tarr, 2005; Smith & Ragan, 1993). This concept has been labeled systematic eclecticism (Snelbecker, 1987), or theoretical eclecticism (Morrone & Tarr, 2005). Morrone and Tarr suggest that learners benefit from theoretical eclecticism, which they define as making instructional choices based on the learning theories that best support the needs of learners. Using theoretical eclecticism successfully requires a comprehensive knowledge of learning theories and a systematic approach for making instructional decisions (Ertmer & Newby, 1993; Morrone & Tarr, 2005; Smith & Ragan, 1993; Snelbecker, 1987).

Morrone and Tarr (2005) used instructional strategies from four learning theories (behaviorism, information processing theory, constructivism, and social constructivism) in a college class about the complex issues of urban schooling for teacher educators.

Their report exemplifies the use of practices from four different theoretical viewpoints and provides an example of the use of theoretical eclecticism in a learning environment.

Similarly Johnson and Aragon (2003) proposed that combining and synthesizing the principles from various learning theories would result in a more powerful instructional approach. Synthesizing concepts from adult, behavioral, cognitive, and social learning theory, Johnson and Aragon developed an instructional model that offers principles for online learning:

1. Address individual differences
2. Motivate the student
3. Avoid information overload
4. Create a real-life context
5. Encourage social interaction
6. Provide hands-on activities
7. Encourage student reflection (p. 34).

Theoretical eclecticism has its critics. Bednar et al. (1991) use the analogy of selecting international dishes from a smorgasbord to describe the use of a different theories, principles, and techniques for instruction. The result is "a meal that represents no nationality exclusively and a design technology based on no single theoretical base" (p. 88). Bednar et al. emphasize that it is untenable to mix different epistemologies in an instructional program and argue that some theories are inherently incompatible (e.g., constructivism and objectivism).

Learning theories provide a framework that supports the connections between research and instructional practice (Schunk, 1996). While learning theories and instructional practice are sometimes perceived as being opposed to one another, Schunk argues that theory and practice can work together to guide teaching and learning.

Adult Learning Theories

Instructor beliefs about the ways that adults learn may be influenced by adult learning theory; and adult learning theory may also influence the selection of instructional strategies for facilitating adult learning. This section of the literature review begins with an examination of the history of adult education in the United States.

According to Knowles (1984a), the field of adult education emerged in the United States in the 1920s with the formation of the American Association for Adult Education and with the publication of *The Meaning of Adult Education* by Eduard C. Lindeman. Lindeman (1926) proposed that education should be immediately beneficial to the learner and not just an effort to prepare the learner for the future. According to Lindeman, the curriculum in adult education should center on the needs and interests of the learners. The experiences of adults should be valued because experiences are like "a living textbook" (p. 10). Adult learners should engage in an active process of discovery learning rather than relying on the second-hand interpretations of experts. The transmission model of learning was not appealing to Lindeman who stated, "our minds, our personalities, are not repositories into which knowledge is dumped in the hope that it can be reclaimed in the hour of need" (p. 176). Lindeman argued for a focus on instructional method rather than on subject matter instruction. The role of the instructor was as a facilitator whose function was "to evoke—to draw out, not pour in" (Lindeman, p. 188). The early work of Lindeman influenced adult educator Malcolm Knowles whose theory of adult learning, andragogy, has sparked much debate.

Andragogy

German grammar school teacher Alexander Kapp was credited with using the term *andragogy* in 1833 to describe the educational paradigm of Plato (Ozuah, 2005; Rachal, 2002). Knowles learned about *andragogy* from Yugoslavian adult educator Dusan Savicevic in 1967, and he began using the term a year later to differentiate between the instruction of children and the instruction of adults (Knowles, 1984b). Before then the term pedagogy had been used to describe the "art and science of teaching" both children and adults (Knowles, 1970, p. 37). The term pedagogy was derived from the Greek stem *paid* (meaning child) and *agogos* (meaning leading) and technically meant "the art and science of teaching children" (p. 37). Pedagogy was associated with compulsory schooling for children for the purpose of transmitting knowledge. The term *pedagogy* was often used in books on adult education and Knowles considered this a contradiction. Knowles proposed principles of andragogy to define learning for adults. The term andragogy was derived from the Greek stem *andr* (meaning man) and from *agogos* (meaning leading) and meant "the art and science of helping adults learn" (p. 38).

In 1970 Knowles wrote *The Modern Practice of Adult Education: Andragogy Versus Pedagogy* that viewed the practice of pedagogy (for children) as dichotomous from the practice of andragogy (for adults; Knowles, 1984b). Knowles (1970) viewed andragogy as having implications for all human leaning:

> Andragogy means more than just helping adults learn; I believe it means helping human beings learn, and that it therefore has implications for the education of children and youth… For I believe that the process of maturing toward adulthood begins early in a child's life and that as he matures he takes on more and more of the characteristics of the adult on which andragogy is based. (p. 38)

Within the next decade Knowles came to visualize a continuum of learning that occurred from childhood to adulthood. Knowles' (1980b) revised book title highlighted this shift in thinking: *The Modern Practice of Adult Learning: From Pedagogy to Andragogy*.

Knowles proposed the concept of andragogy and five principles of adult learning that "though unproven can be found woven into the modern view of the learning process" (Courtney, Vasa, Luo, & Muggy, 1999, p. 13). The principles of andragogy include the following concepts: Adults have a need to be self-directing in learning; adults bring a wealth of experiences that contribute to their own learning and the learning of others; readiness to learn is related to real-life need such as in the roles and responsibilities of an adult in society; adults are life-centered learners and want learning to relate to real world contexts such as problem solving and adult learners are guided by intrinsic motivation such as increased self-esteem (Feuer & Geber, 1988; Knowles, 1968, 1984a; Merriam, 2001). Table 3 compares the assumptions underpinning the theories of pedagogy and andragogy.

The assumptions of andragogy have implications for planning, implementing, and evaluating learning and for creating learning environments (Knowles, 1980b). According to Knowles, the learning climate for adults should encourage an informal friendly atmosphere of acceptance, support, respect, and embrace a spirit of joint inquiry and freedom of expression. Within the learning environment, Knowles envisioned learners assessing their own learning needs by building a competency model. For example, a competency model of a "good researcher" would examine the performance of a good researcher and define the competencies involved. The instructor provides assistance as the learner engages in assessment activities to determine the gap between what the learner knows

Table 3

A Comparison of the Assumptions of Pedagogy and Andragogy

Regarding	Pedagogy	Andragogy
Concept of the learner	Teacher makes all decisions about learning for the dependent learner	Teacher encourages the learner become self-directing
Role of learners' experience	Learners gain more from teacher experience through transmission model	Rich experiences of learners explored through experiential learning techniques
Readiness to learn	Children the same age are ready to learn the same things through mandated curriculum	Real-life need spurs learning readiness, instructor provides tools and procedures to help learners
Orientation to learning	Learning is organized by subjects that will be applicable later in life	Learning is focused on developing competency for immediate application

Source: Knowles (1980b).

and needs to know. The gap causes the dissatisfaction of the learner and motivates learning. Knowles (1980b) emphasized learner involvement and responsibility in a collaborative planning process with the instructor serving as a resource guide.

The theory of andragogy has been the topic of much debate in the field of adult education. Andragogy has been questioned by some adult learning theorists. Merriam and Cafferella (1999) outline the following questions and points of contention: is andragogy a theory, a set of assumptions, or a set of good practices? Do the assumptions about adult learners only apply to adults? Or do the assumptions also fit children and young adults? Brookfield (1986) asserted that Knowles presented "assumptions" about learning rather than an empirically proven theory. When Knowles' beliefs changed to reflect a continuum between pedagogy and andragogy rather than the dichotomy indicated in

earlier work, the argument that the assumptions of andragogy applied only to adults was no longer viable (Knowles, 1980b). Questioning the concept of adulthood as linked to self-direction and the degree to which adults are self-directed learners, Brookfield (1986) stated:

> While self-directedness is desirable condition of human existence it is seldom found in any abundance. Its rarity, however, in no sense weakens the view that the enhancement of self-directedness is the proper purpose of education; instead, it provides a compelling reason why educators should pursue this end with unflagging zeal. (p. 94)

Brookfield, like Knowles, recognized the rich learning experiences that adult learners bring to the learning setting and the need for adult learners to reflect critically on experiential knowledge.

Transformational Learning

In addition to examining andragogy, transformational learning offers a different way of looking at adult learning. Transformational learning examines the power and ability of learning to change and transform lives (Baumgartner, 2001) and explores the ways that an adult learner moves from negotiating personal meaning guided by world experiences toward shaping their future actions (Merriam & Caffarella, 1999). Merriam and Caffarella credit Mezirow for fully developing a theory of transformational learning in 1970. Mezirow focused on the cognitive processes of learning such as the development of meaning through reflection and dialogue. The theoretical underpinnings of transformational learning are similar to that of constructivism. Knowledge is interpreted and reinterpreted in a contextual setting (Baumgartner, 2001). Within the framework of transformation learning, the purpose of education is empowerment.

Learning occurs “by elaborating existing frames of reference, by learning new frames of reference, by transforming points of view, or by transforming habits of mind”

(Mezirow, 2000, p. 19). A frame of reference is described as a meaning perspective used to filter perceptions. Transformational learning is indicated by a change in beliefs or attitudes or by a change in perspective (Merriam & Caffarella, 1999; Mezirow, 1996). Characteristics of the transformational learning process include reflection, validation of meaning perspectives (frames of reference), and taking actions on personal beliefs and the beliefs of others. According to Mezirow (2000), the goal of transformative learning is to become socially responsible and empowered to make informed choices through dialogue and reflection.

Mezirow (2000) describes the process:

> Transformative learning refers to the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that we may generate beliefs and opinions that will prove more true or justified to guide action. (p. 7)

Transformational learning requires the intentional effort of the learner and results in a perspective shift allowing adult learners to understand themselves better (King, 2005). Adult life is replete with change and transition, and transitions may lead to occasions for adults to consider changes in their beliefs or perspectives that are associated with transformational learning (Merriam, 2005). Some events that cause transitions are planned while others are not; likewise some events are anticipated while others are not. Sargent and Schlossberg (1988) define transitions as

> events (like retirement) or nonevents (like being passed over for a promotion) that alter adult lives. The more the event or non-event alters an adult's roles, routines, assumptions, and relationships, the more he or she will be affected by the transition. (p. 58)

Although adults respond to life transitions in different ways, one response is to learn new skills, behaviors, and social roles (Merriam, 2005). Learning may result from the

encounter with a transition or the experience could be rejected or go unnoticed. Events must be "discomforting, disquieting or puzzling enough" to be attended to and the discomfort must touch the meaning perspectives or habits of the mind to engage the learner in the process of transformation.

Self-directed Learning

One frequent goal of adult education is to help learners develop skills to become self-directed learners (Merriam & Caffarella, 1999). Candy (1991) describes the literature on self-directed learning as confusing, fractured, and without consistency. Self-directed learning has been described as a process and method of organizing instruction (Brockett & Hiemstra, 1991; Candy, 1991), as personal attributes that are influenced by a learner's attitudes, values, and beliefs (Guglielmino, 1977), as a process of conducting informal, independent, self-learning projects, and finally as a process that involves learner control of learning (Candy, 1991).

Some scholars believe that self-direction is an ability that can be taught (Candy, 1991). Brockett and Hiemstra (1991) prefer the term self-direction in learning and describe it as a process of learner responsibility to plan, implement, and evaluate their own learning. One strategy for managing self-direction in learning is the design, use, and evaluation of learning contracts to manage and organize instruction (Kasworm, 1983; Knowles, 1975; 1980a).

The goals of self-directed learning cover three broad areas defined by theoretical outlooks (Merriam & Caffarella, 1999). The first goal based on humanistic philosophy is to enhance adult ability to be self-directed learners. The role of educators is to assist learners with developing a plan for learning, executing the plan, and evaluating the

results. Most of the research on self-directed learning falls into this category. The second goal is to foster transformational learning and is seen in the work of Mezirow and Brookfield. Critical reflection plays an important role in developing strategies and self-directed learning activities to support the transformational learning perspective. The third goal of self-directed learning is to promote emancipatory social action. Supporters of this goal want learners to think about the sociopolitical implications of learning and engage learners in collective action. This view incorporates the use of participatory research and the use of dialogue for critical self-directed learning.

Self-directed learning is described by Knowles (1975) as

> …a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes. (p. 18)

Knowles provided resources to prepare instructors and learners for completing self-directed learning tasks. The resources included a self-rating scale to determine the competencies required in self-directed learning activities, a sample learning contract, a consultation skill-practice, and a variety of rating scales. Knowles proposed that adults needed assistance to develop the skills for self-direction in learning in formal settings. In Knowles' view, informal support networks (three to six learners) are useful for providing assistance to one another and helping each other stay on target to meet learning goals. Knowles suggested a shift in the role of the instructor from an expert, knowledge provider, to a facilitator responsible for supporting learners.

Research Studies, Adult Learning Theory, and Online Instruction

Theories such as andragogy, transformational learning, and self-directed learning have implications for online instruction and within my study. The rich experiences that

adults bring to the learning setting can be used for reflection, reconstruction, transformation, and learning (Courtney et al., 1999). Learning experiences for adults should center on real life need according to the assumptions of andragogy (Knowles, 1984a, 1984b). Adult learners may also prefer to have increased control over their learning along with choices enabling them to become self-directing in learning.

OLEs can incorporate authentic tasks that mirror the real world, thus incorporating the needs and interests of adult learners (Courtney et al., 1999). Authentic tasks have real-world relevance and provide learners with an opportunity to solve complex, ill-defined problems over a sustained time period (Reeves, Herrington, & Oliver, 2002). Learners working with authentic tasks use a variety of resources, consider diverse perspectives, and collaborate to create worthwhile, polished products. Assessment is an integrated aspect of authentic learning. Problems can be solved and activities can be completed by choosing a variety of solutions. Using a problem solving or inquiry approach to learning provides opportunities to develop, articulate, and share expertise (Richardson, 2003). An online course featuring authentic tasks should be learner-centered and provide opportunities for learners to make connections with prior knowledge. OLEs may offer adult learners opportunities for increased control through varied sequencing and pacing (Abramson & Ellis, 2000) and individualized instruction (Many et al., 2004); however, levels of self-direction in learning among adult learners varies (Kasworm & Yao, 1992).

Hase and Ellis (2001) noted the opportunity for adults to develop independent learning skills through a flexible curriculum that builds on current abilities and shifts to learner focused approaches thus encouraging creativity. In this setting, learners have

more control to negotiate course objectives. Assessment is used to focus learning rather than to focus content. Jointly developed rubrics can assist learners with self-assessment and aid in the development of self-directed learning skills (Kanuka & Garrison, 2004).

Much of the literature about online learning regards the role of the OPD instructor as a facilitator of learning (Dove, 2006; Nkonge, 2004) and promotes active learning (Desimone, Porter, Garet, Yoon39 & Birman, 2002; Vonderwell & Turner, 2005). With the role shift from teacher-centered to learner-centered (Wilson et al., 2003) the learner becomes an information producer and uses online discussion forums and interactive chat tools to solve authentic problems (Abramson & Ellis, 2000). Adults may be motivated intrinsically, displaying a willingness to learn for the sake of learning (Courtney et al., 1999). Socialization, interaction, and peer pressure are also powerful motivators for adult learners in online courses (Johnson, 2005). Although there has been much written about the characteristics of adult learning, the majority of ideas proposed by adult educators have not been validated empirically (Courtney et al, 1999).

Holcombe (2001) used a qualitative case study methodology to explore the barriers and facilitators of online learning for five adult learners. Data sources included surveys, reflective journal entries, field notes from observations, and face-to-face interviews. The theoretical framework for the study combined concepts of andragogy based on the work of Knowles with the chain of response model developed by Cross. Limitations of the study included the small sample size and potential researcher bias because the researcher served as the course facilitator for the study. Holcombe developed a profile of an online learner that is helpful for understanding the characteristics and needs of online adult learners. Holcombe (2001) stated that the online learner:

- Has a strong sense of awareness of his own learning needs
- Feels a sense of ownership over his learning process
- Is extremely self-motivated and initiates learning
- Is comfortable simultaneously acting as a teacher and learner
- Is the type of learner that does not need or want a lot of instructor support
- Will often exceed expectations when left to work independently
- Prefers point-of-use (also called just-in-time) training over formal methods of instruction
- Prefers to independently problem-solve as opposed to asking for help
- Prefers learning independently
- Prefers working at his own pace
- Prefers the flexibility of working at unconventional hours that are personally convenient
- Prefers to learn in his own environment
- Prefers customized learning experiences designed to meet his specific needs
- Does not necessarily have extensive formal technology training
- Is comfortable using a variety of technology tools for personal and professional tasks
- Feels that technology is useful in both his personal and professional lives
- Has a working knowledge of Windows or Macintosh [*sic*] operating systems
- Has a working knowledge of the Internet (p. 318).

Instructor beliefs about the ways that adults learn in online professional development courses may be influenced by adult learning theory. Adult learning theory may also influence instructor beliefs about the use of instructional strategies to facilitate online learning with adults.

Online Instructor Skills

The online classroom is a powerful learning arena that presents great challenges to instructors as they learn the art of teaching online (Joy, 2004; Palloff & Pratt, 2000). Teaching online is different in many ways from teaching in a face-to-face environment. Not only are instructors and learners physically separated, the information they share may be stored and transmitted over space and time (Gold, 2001). Instructors are often expected to shift from teaching in a face-to-face environment to teaching online with little training or support (Fein & Logan, 2003). While the new online instructor will face

challenges and obstacles as they learn to teach online, skills and strategies have emerged from research and practice to support the development of artful online instructors.

Providing pre-learning activities to clarify course policies, course procedures, course structure, netiquette, and instructor expectations is a good way to start a course because it orients learners and helps learners avoid confusion (Berge, 2002b). Creating and using supportive pre-course activities helps learners understand the roles and responsibilities of online learning and contributes to learner readiness (Mykota & Duncan, 2007). Adult learners want to have specific guidelines from the instructor and want to monitor their own progress (Eastmond, 1994). In a mixed-method study of online instructors (n = 32) and graduate students (n = 170), learners placed importance on understanding the expectations of the instructor (Dennen, Darabi, & Smith, 2007). Online instructors indicated the importance of informing learners about expectations for assignments and suggested that learners need to be taught how to interact in an OLE (Lewis & Abdul-Hamid, 2006).

The online instructor is responsible for setting the agenda, pacing the course, providing course objectives, developing rules, establishing a decision making process, and evaluating outcomes (Paloff & Pratt, 2001). Experienced instructors often customize their course before it begins (Morris, Xu, & Finnegan, 2005). The course syllabus, assignments, assessments, evaluations, policies and procedures should be posted along with explicitly stated expectations and guidelines for participation (Heuer & King, 2004; Kanuka & Garrison, 2004; Maor & Zariski, 2003). Guidelines and expectations assist learners with becoming full participants in an online course.

The Instructor as Facilitator

The literature about online learning for adults provides many examples of the role of the instructor as a facilitator of learning. Findings from a mixed method study of graduate students (n = 39) who were enrolled in two online courses indicated that learners enjoyed the role shift that situated the instructor as the course facilitator (Dove, 2006). In a qualitative case study of eight university instructors, Nkonge (2004) reported that instructors experienced a paradigm shift from a teacher-centered approach to a student-centered constructivist approach. Using a constructivist student-centered approach influenced their teaching role (guide) and ways of interacting with learners. Instructors in this study encouraged learners to become active and engaged learners. Three of the eight instructors did not describe themselves as constructivists even though each one incorporated constructivist practices in their courses. For example, one instructor encouraged learners to take ownership and responsibility for their learning while another instructor asked learners to set the agenda for virtual chats, both strategies are consistent with constructivist approaches.

Maor (2003) examined the role of the instructor in facilitating online learning for 12 science or mathematics teachers pursuing graduate degrees. Using a qualitative case study guided by a social constructivist perspective, one goal of the study was to create an online learning community. Student participation in online discussions and serving as a discussion leader were required. Data analysis examined student and instructor contributions to the class discussion and evaluations conducted at the end of the semester. The goals of the instructor (researcher) included promoting learner interaction through a

student centered approach, increasing learner responsibility for learning, encouraging peer learning, and developing reflective thinking through online discussion.

One technique used by the instructor to facilitate learning involved the creation of student discussion leaders (Maor, 2003). Each learner was required to serve as a discussion leader. The discussion leader was responsible for asking questions, guiding discussion, and promoting reflective thinking. When reflective thinking was not apparent in the initial discussions, the instructor intervened with probing questions to focus future discussions and guide student interaction towards more reflective thought and active dialogue. Additionally, the instructor asked learners to craft their postings to include the following elements: criticalness, scholarship, connection to experiences, and professionalism. Findings from the study indicate that although reflective thinking grew, it was not demonstrated at the level hoped for by the researcher. Ideas to increase reflective thinking and collaboration included the use of scaffolding by the instructor.

Training instructors to be effective online moderators is another worthwhile approach to support and sustain learner interest and involvement. Salmon (2002) was involved in teaching lecturers to become e-moderators at a university business school. The online training program featured a five-stage teaching model that included training with the software used in the online environment, provided experience as an online learner, and served to teach online moderating skills. Reflection and community building were an integral part of the learning experience. Learners were asked to reflect on their learning at each stage of the learning model. Personal views of online learning changed as the learners progressed through the training course. Although most participants enjoyed their online learning experience, they reported that learning online was time

consuming. Implications for online instructors include the importance of being self-reflective, promoting openness, validating learner experiences, and honoring the rich experiences of adult learners (Salmon, 2002).

Providing feedback to the learner is considered important to instructors (Dennen et al., 2007; Salmon, 2002; Wilson et al., 2003) and to learners (Howland & Moore, 2002; Northrup, 2002). Instructors link communication and feedback activities to learner performance and learner satisfaction (Dennen et al., 2007). Feedback from the instructor can be useful for helping learners assess and manage their learning (Nkonge, 2004), teaching learners how to collaborate more effectively (Zumbach, Reimann, & Koch, 2006), and for developing the content mastery of learners (Lee & Gibson, 2003). In a qualitative study of eight online instructors, findings indicate that instructors perceive that learners expected to receive quick feedback from the instructor in online environments (Easton, 2003). Findings from a study of online learners (n = 170) indicated that the timeliness of feedback was considered more important than having extensive feedback (Dennen et al., 2007).

Educators can learn to examine their beliefs, assumptions, and biases through critical reflection (Whipp, 2003). Through the lens of critical reflection, educators may observe new ideas that allow them to reframe questions, re-examine issues, and consider multiple perspectives. As a teacher researcher, Whipp used a design experiment methodology to examine the use of electronic discussion conducted via e-mail. The setting for the study was a teacher preparation program at a private university. The majority of participants in the study were white, female, and 22 years old or younger. The study took place over two semesters with two different classes of undergraduate juniors

and seniors. Data were collected from student discussion postings, written surveys, and a reflective portfolio assignment. A framework based on the work of Hatton and Smith (1995) was used to measure the reflective nature of the postings. This framework analyzed reflection through the analysis of four types of writing. The first type of writing is descriptive (not reflective). The second is descriptive reflection and is characterized by personal justifications and/or alternate viewpoints. The third is dialogic reflection and involved a "stepping back" (p. 48) which included further exploration, additional alternatives, explaining and hypothesizing and is described as analytical or integrative. The fourth and highest level is critical reflection. Critical reflection is characterized by examining multiple perspectives, multiple contexts, and the power relationship between teachers, students, schools, and social institutions. Data analysis of the first semester postings showed that 44% of messages were not reflective, 43% were descriptive reflection (lowest reflection level), 11% were dialogic, and 4% were considered to be at the critical reflection level (Whipp, 2003). Data from surveys indicated that although students thought the discussions were emotionally supportive, only three students thought that the discussions provided an opportunity to reflect on teaching practices.

Whipp (2003) added learner support via scaffolds for the second class: critical readings, discussion prompts, discussion summaries, assessment criteria, and increased communication with students. Results indicated that the level of reflection was much higher during the second semester with 15% of the messages categorized as not reflective, 46% as descriptive, 28% as dialogic, and 11% as at the critical level. Results suggest that students need a better understanding of what reflection is and of its connection to professional practice. Suggestions to increase reflection included clearly

defining student roles and providing assessment criteria to help learners clarify expectations and improve performance. Whipp suggested using an expert-novice pairing to help novice students increase understanding.

Kanuka and Garrison (2004) used a focus group interview and the community of inquiry model advanced by Garrison, Anderson, and Archer (2000) to understand strategies for facilitating learning in an asynchronous, text-based online learning. The focus group was made up of ten experienced online instructors from a research-based university in western Canada. Participants had a minimum of a master's degree and were experienced in online instruction. All ten participants believed that an effective online instructor would actively guide discussion (Kanuka & Garrison, 2004). One suggestion for improving discussions was for the instructor to pose relevant questions. Findings indicated that one difficulty was keeping online discussion active and engaging. Instructor presence, lack of presence, or formality can hinder online discussions. Instructors need to have good moderating skills and agile abilities to provide just enough presence to motivate discussion without squelching it.

Using a qualitative case study methodology in a hybrid course setting, Jetton (2004) examined nine pre-service teachers who worked with a struggling fourth or fifth grade student during a literacy practicum. Each pre-service teacher developed a case study based on his or her selected student’s prior test scores and also used classroom assessments and observations. Participants explored assessment ideas with their colleagues through online discussions. Data collection included notes from the course instructor, observations, and meetings conducted by the practicum teacher (the researcher), and the content of the discussion postings. Jetton used a constant

comparative method to determine patterns, themes, and categories for the analysis of the discussion postings. The themes were checked against data collected from observations and instructor's notes. Themes that emerged from the discussions included empathizing, problem solving, reporting progress, making connections, gaining multiple perspectives, adding depth, and eliciting instructor input.

Findings indicated that participants found online discussions redundant because they had already engaged in face-to-face peer discussion (Jetton, 2004). Another difficulty reported was the lapse of time between postings and responses. Lack of learner prior knowledge may also have contributed to a lack of confidence to participate in discussions. The authoritarian approach of the course instructor could have undermined student confidence in the subject matter. Other problems emerged from the study such as the indication that some participants did not like to write, had poor confidence in their writing ability, or felt that the purpose of writing for online discussion was to impress others. Implications for practice included motivating students to write and share ideas, providing learners with the opportunity to define their own goals for online discussions, and allowing ample time for learners to develop social relationships (Jetton, 2004). The role of the instructor is crucial in the development of a collaborative environment in which learners feel safe to share ideas and develop their own voice. For the instructor there is a fine line between promoting participation and stifling it (Jetton, 2004; Kanuka & Garrison, 2004). One suggestion to increase self-reflection was to ask students to read their postings on a selected theme, in the time order the postings were made, and reflect on the progression and development of their ideas (Jetton, 2004).

Developing a collaborative environment is also important to adult learners. Using a qualitative case study approach, Vonderwell (2003) studied the experiences of pre-service teachers (*n* = 22) from a large Midwestern university as they participated in an online educational technology applications course using asynchronous communications. The course instructor (researcher) used strategies to motivate learners and scaffold instruction. The instructor provided feedback to the class and to individuals on a weekly basis and answered student emails within 48 hours. Online discussion transcripts were used to understand how class design and activities impacted interaction and learning.

Students indicated that the online environment offered more opportunities to ask questions (Vonderwell, 2003). Students felt less pressure from worrying what other students thought about them. Students indicated that they participated more freely in the online environment than in traditional face-to-face environments. Other studies provide similar reports about learner participation in online courses. Learner participation in online courses has been described as more inclusive (Nkonge, 2004) and has been attributed with increasing the opportunities for the participation and accountability of all learners (Dove, 2006) and for reducing the number of learners who can hide (lurk) in the back of the class (Joy, 2004). Collaboration among students was considered difficult and frustrating and students indicated that they did not develop a personal relationship with the instructor (Vonderwell, 2003). Providing feedback assisted learners with learning to collaborate and enhanced collaborative behavior (Zumbach et al., 2006). Learners benefited from having instructor support. Training with tools to help learners' monitor and assess their collaborative efforts was also helpful.

Even when communication from the online instructor was considered positive, learners preferred the more personal nature of communication experienced in face-to-face settings (Vonderwell, 2003). Learners in this study perceived the time delay for receiving feedback as a barrier in the online instructional environment. A study conducted in a 2-year technical college indicated that learners had to adjust to the time delay inherent with asynchronous communication (Mannan, 2003).

Students expressed different attitudes about collaboration for learning in OLEs and noted the following problems: similar responses to discussions, no cohesive group feeling, lack of social interaction, lack of cooperation, and miscommunication (Vonderwell, 2003). The process of writing for asynchronous online discussions provided time for learners to engage in reflective thought. Learners had time to write, revise, and respond with clarity. Not all researchers report positive experiences with online learning. Eastmond (1994) argued that many features of online learning listed in the literature (interactivity, collaboration, reflection and self-direction) do not always occur in OLEs and described computer conferencing as didactic and competitive. Hara and Kling (2000) reported that online learners suffered anxiety when communication break downs occurred in online courses.

In summary, effective strategies for facilitating online adult learning included providing time for exploration, matching instructional strategies and learning activities with learner needs and learning styles (Palloff & Pratt, 1999), using learners as discussion leaders (Maor, 2003), providing feedback (Salmon, 2002), scaffolding instruction (Maor, 2003), summarizing discussions, validating learning experiences (Salmon, 2002), defining reflection (Whipp, 2003), building reflection into instruction (Salmon, 2002;

Whipp, 2003), scaffolding instruction (Whipp, 2003), guiding discussion (Kanuka & Garrison, 2004), allowing learners to define their own goals for online discussions (Jetton, 2004), and providing timely feedback (Vonderwell, 2003). In addition, it is also important to consider the instructor's presence which can be demonstrated through the application of good moderating skills and the posing of relevant questions to guide discussion (Kanuka & Garrison, 2004).

Instructor style and strategies

Communicating effectively in writing is a crucial skill for online instructors (Hase & Ellis, 2001; Siedlaczek, 2004). Writing well may be challenging to some instructors who feel that their verbal skills exceed their written skills. Instructors can influence the amount of voluntary learner participation in online discussions (Thompson & Savenye, 2007). Easton (2003) noted that online instructors developed communication patterns to work with mentors who were working directly with online learners. Instructors used a variety of communication methods including: individual and group email, telephone, announcements, and online chat.

Online instructors can better understand learner perspectives about online learning issues if they took an online class themselves (Salmon, 2000; Siedlaczek, 2004). It is suggested that examining and evaluating different online courses for pedagogical and instructional strategies, and for the use of a variety of media, also helps the instructor learn from the online learner's perspective (Herrington & Bunker, 2002). To counter the dominance of text-based content, instructors can provide a rich array of media resources to support different learning styles (Siedlaczek, 2004). Eastmond (1994) argued that learners would benefit from more active and interactive OLEs that include motion, audio,

and kinesthetic features. Providing a variety of different types of assignments or working arrangements was suggested to engage learners (Palloff & Pratt, 2001). Using case studies, simulations, collaborative dyads, or collaborative groups are other options. In a study of adult learners in two graduate seminars, paired interaction (dyads) proved useful for promoting reflection and collaboration in an online setting (Lord & Lomicka, 2007).

Online learners

Online instructors are interested in discovering new techniques and strategies to assure the success of online learners. Schrum and Hong (2002) identified seven dimension and strategies for online learner success including: access to tools; technology experience; learning preferences; study habits and skills; goals or purposes; lifestyle factors; and personal traits and characteristics. Concerns about learner readiness for online learning arose in several studies (Bathe, 2001; Keeton, 2004; Motteram & Forrester, 2005). Eastmond (1994) suggested that it is necessary for the instructor to teach learners how to become successful with online computer conferencing while noting that this is rarely done.

Creating and using supportive pre-course activities would help learners understand the roles and responsibilities of online learning and would contribute to learner readiness (Mykota & Duncan, 2007). Developing and instituting a comprehensive induction program that covers technical requirements, prerequisite skills, learning management systems (LMS), communication tools, and provides guidance about learning processes online, studying online, managing time, and using learning strategies was also recommended (Motteram & Forrester, 2005). Induction programs can be useful for pre-assessing the learner's technology skills and assisting the learner with developing the

skills to use research tools, such as the library and databases with access to online journals. Finally, an induction program could be used to encourage, monitor, and support the use of course tools such as online chat, discussions, and to clarify learner processes to obtain needed help and support. The induction program described in this study was viewed as an ongoing process rather than as a one-time event.

Online learners' perceptions about skills, strategies, and techniques to be successful with online learning are also important to examine. A mixed-method study of graduate students (n = 39) indicated that online learning requires better self-discipline, and self-management skills (Dove, 2006). Learning was described as an active experience and it was noted that online learning forces learner accountability. Learners may have difficulty being disciplined in directing their own learning and may not understand the time and effort required to complete an online course (Bathe, 2001; Howland & Moore, 2002). A qualitative study of online learners (n = 48) reported that while some online learners described themselves as proactive and self-reliant, other learners struggled with relying on their own efforts and indicated that they needed more structure, support, and feedback from the instructor (Howland & Moore, 2002). Participants asserted that managing time and tasks was important; however, some learners had difficulty staying on schedule. While developing self-reliance was viewed as a positive outcome by some learners, other learners reported that the need to develop self-reliance was an obstacle and argued that the instructor was shirking their responsibilities by not teaching the content. Results of this study indicated that students who are not self-regulated require more support from the instructor. A summary of online instructor skills is provided in Table 4.

Table 4

Summary of Online Instructor Skills

Topic	Main Ideas
Online Instructor Challenges	-Physical separation of instructor/learners (Gold, 2001) -Information transmitted over space and time (Gold, 2001) -Instructors shift from face-to-face to online instruction with little training/support (Fein & Logan, 2003)
Online Instructor Skills and Strategies	-Pre-learning activities to clarify policies, procedures, structure, guidelines ; instructor expectations ; teach learners how to interact (Berge, 2002b); Pre-course activities contribute to learner readiness (Mykota & Duncan, 2007) -Provide guidelines and expectations (Dennen et al., 2007; Eastmond, 1994; Lewis & Abdul-Hamid, 2006) -Set the agenda, pacing the course, providing objectives, establish decision making process (Palloff & Pratt, 2001) - Customizing the course ; Posting policies and guidelines (Heuer & King, 2004; Morris et al., 2005)
Instructor as facilitator	-Role/paradigm shift of instructor as facilitator (Dove, 2006; Nkonge, 2004); Create online learning community, student discussion leaders, encourage reflection (Maor, 2003) -Instructor as moderator (Salmon, 2002) -Providing feedback (Dennen et al., Salmon; Wilson et al., 2003) -Critical reflection, scaffolding (Whipp, 2003) - Posing relevant discussion questions, guiding discussions (Kanuka & Garrison, 2004) -Problems with discussions, instructor encouraging learners to define own goals for online discussions, time to develop social relationships (Jetton, 2004) -Developing collaborative environment (Vonderwell, 2003); more learner participation, more inclusive environment (Dove, 2006; Nkonge, 2004); no lurkers (Joy, 2004) -Instructor – learner relationship, difficulties with communication and writing (Vonderwell, 2003) -Online environment may be didactic ; Learners suffer anxiety when communications break down (Eastmond, 1994; Hara & Kling, 2000)

(Table continues)

Topic	Main Ideas
Instructor strategies	-Scaffolding supports (Whipp, 2003) -Guiding discussion with relevant questions; assisting learners to develop self-management skills (Kanuka & Garrison, 2004) -Motivating students to write; Learners define their own goals for discussions and find own voice (Jetton, 2004)
Teaching styles and strategies	-Instructor communicates effectively in writing and uses appropriate tools such as electronic journals (Hase & Ellis, 2001; Siedlaczek, 2004); Instructor encourages participation ; Establish communication patterns (Thompson & Savenye, 2007) -Online instructors benefit from being online learners themselves (Salmon, 2002; Siedlaczek, 2004); experience the learner's perspective (Herrington & Bunker, 2002) -Use a rich array of media to support learning styles; Provide active and interactive learning (Eastmond, 1994) - Use a variety of assignments and working arrangements (Palloff & Pratt, 2001) - Use dyads to promote reflection (Lord & Lomicka, 2007)
Online learner skills	-Seven dimensions: access to tools, technology experience, learning preferences, study habits and skills, goals or purposes, lifestyle factors, and personality traits and characteristics (Schrum & Hong, 2002)
Online learner characteristics	-Concerns about learner readiness (Bathe, 2001; Keeton, 2004; Motteram & Forrester, 2005) -Teach learners about computer conferencing (Eastmond, 1994) -Provide pre-course activities to help learners understand roles and responsibilities of online learning ; Induction program (Motteram & Forrester, 2005; Mykota & Duncan, 2007) -Learner self-discipline and self-management skills (Dove, 2006; Howland & Moore, 2002)

Online Instructional Strategies

This study is based on the premise that instructor beliefs will influence the selection and use of instructional strategies in OLEs. Online instructional strategies

include techniques to encourage learner participation and interaction (Eastmond, 1994; Easton, 2003), techniques to encourage collaboration and communication (Sellers, 2001), and techniques to encourage the use of critical thinking skills (Ryan, Hodson-Carlton, & Ali, 2005). While many strategies used by online instructors are similar to those used by instructors in traditional classrooms, managing learning in a virtual learning environment requires a paradigm shift for the instructor (Easton, 2003). In a qualitative case study of online instructors, adopting a constructivist approach changed the ways the instructors taught (Nkonge, 2004). Teaching online provides the online instructor with opportunities to reflect on their teaching practices (Ryan et al., 2005).

Encouraging online discussion is an important component of online learning. Assigning learner roles in online discussions helps engage learner interest in posting, reading, and reflecting on discussions (Bonk et al., 2004). If learner discussion produces too much agreement and not enough dialogue, assigning the roles of pessimist or an idea squelcher can encourage debate. In a study that examined the asynchronous discussions of university students in business classes, Maurino (2007) noted that although learners shared personal experiences that may not have been shared in a face-to-face classroom setting, the discussion centered on agreement rather than differences of opinion or on conflict. Differences of opinion or conflict expressed in discussions have the potential for raising the level of learning.

Learners may be paired as “critical friends” and can encourage and support one another. Online debates provided opportunities for active learning and reflection encouraged learners to consider different viewpoints, allowed learners to share their individual perspectives, and offered opportunities to post rebuttals (Alexander & Boud,

2001). Lord and Lomicka (2007) suggested pairing learners in dyads and encouraging interaction and feedback through online journaling to promote deep reflection and collaboration. Using role-plays and simulations that require the real world application of knowledge to solve problems in authentic settings can lead to engaged, active learning, while helping learners develop understandings of complex systems (Vincent & Shepherd, 1998).

Selecting and using strategies to encourage collaboration among learners is not sufficient to establish actual collaboration in online courses (Vonderwell & Turner, 2005). To increase collaboration in OLEs, it has been suggested that instructors need to teach adult learners how to work together collaboratively. Providing instructional strategies designed to develop collaboration in online courses along with offering opportunities for learners to socialize with each other are techniques recommended to increase online collaboration (Fung, 2004). One instructional strategy shown to be helpful with enhancing collaborative behavior is instructor feedback to learners about the collaboration process (Zumbach et al., 2006). Supporting learners with tools to monitor and assess their collaborative efforts would also help establish collaboration in OLEs.

Concerns for Online Instructors

Online instructors have instructional concerns and concerns about the potential for increased time commitments often associated with online teaching and learning. These two topics will be explored next along with strategies to ameliorate the concerns.

Instructional concerns

Addressing learning styles, strengthening learners' group problem-solving skills, developing interactivity, and developing learners' verbal skills are concerns for online

instruction (National Education Association, 2000). Davis (2001) explored the history of distance learning and was concerned about the level of interaction among learners. Davis stated, "one of the most significant [concerns] is the increased emphasis on designing both varying instructional approaches and substantive interaction into the courses to involve students in a variety of ways" (para. 20).

The National Education Association (NEA, 2000) conducted a telephone survey of 402 distance learning faculty members (NEA members) in higher education. Distance learning instructors represented approximately 10% of the higher education membership in the NEA. Traditional and distance faculty member demographic profiles were similar because most faculty members who taught distance courses also taught traditional courses. The NEA study defined a distance learning course as one in which "more than half of the instruction takes place when faculty and students are at different locations and the instruction is delivered through audio, video or computer technologies" (p. 53). The majority of the participants in this study were employed at 2-year or 4-year colleges and universities and taught primarily undergraduate courses. Table 5 provides a summary of concerns of the higher education faculty members surveyed by NEA.

Table 5

Survey of Distance Learning Higher Education Faculty

Concern	Concern was better addressed via distance learning	Concern was better addressed via traditional learning
Learning styles	33%	41%
Group problem-solving skills	27%	42%
Interactivity	27%	47%
Verbal skills	24%	45%
Oral presentations	18%	48%

Source: National Education Association (2000)

Gaytan and McEwen (2007) surveyed university faculty (n=29) who taught online courses and online learners (n=332) regarding their perceptions of the instructional quality of online learning. Findings indicated that 83% of the instructors and 80% of the learners felt that online courses were at least as rigorous as face-to-face courses. Instructor and student perceptions differed in regard to the use of instructional strategies to support the different types of learning styles among online students. While 72% of online instructors indicated that a variety of instructional strategies were used to assist learners with different learning styles, only 42% of the student participants indicated agreement. Lin & Overbaugh (2007) compared FTF & online sections of a course to determine if students who were given a choice between of a synchronous or an asynchronous discussion made a decision based on their learning style. Results indicated that learners most frequently chose asynchronous discussions. Learners' decisions were based more on time management issues than on their learning style preference.

In addition to addressing learning styles, online instructors have concerns about establishing interaction in online courses (NEA, 2000). Gaytan and McEwen (2007) reported that 52% of the online students and 45% of the online instructors agreed that the online learning environment was highly interactive. While 52% of the online instructors indicated that various technologies were used to promote interaction, only 45% of the student participants indicated agreement. Gaytan and McEwen suggest that online instructors use both synchronous and asynchronous discussion tools and communication methods to foster interaction.

Time Commitment

Instructor presence is important in the successful facilitation of online courses (Anderson et al., 2001; Garrison et al., 2000; Schrum, Burbank, Engle, Chambers & Glassett, 2005). Anderson (2004a) noted, "the instantaneous nature of online learning can lead to an unrealistic expectation by learners that teachers will provide instant feedback and assessment on submitted assignments" (p. 286). Other studies support the perception that online learners expect quick, timely feedback (Motteram & Forrester, 2005; Northrup, 2002) and instructor availability (Howland & Moore, 2002; Wilson et al., 2003). While instructors may be concerned with providing extensive feedback, learners in one study thought the timeliness of feedback was more important than receiving extensive feedback (Dennen et al., 2007). Providing timely feedback to learners is time consuming for the instructor. Therefore, it is important for an online instructor to consider strategies to maximize instructor presence and support learners while minimizing the workload.

Communicating with online learners via email and online discussions may increase the amount of time used by instructors in online courses (McIsaac et al., 1999). Other studies contend that online teaching requires more instructor time than teaching in a traditional face-to-face classroom (Anderson, 2004b; Many et al., 2004; Reinheimer, 2005; Ryan et al., 2005; Tomei, 2006). Researchers do not agree that online instruction requires more time than instruction in traditional learning environments. In a study conducted by Morris et al. (2005), only 4 of 13 instructors reported an increase in the teacher workload resulting from teaching online. Another study reported that instructor time for face-to-face course delivery and online course delivery was equivalent when

class size was factored in; however, the instructor's pattern of interaction in online courses was different from traditional courses (Hislop & Ellis, 2004). Dove (2006) reported that an online instructor's time commitment was similar to teaching in a face-to-face environment and noted that online instructors seem to spend more time at the beginning of the course and the time requirements smooth out as the online course progresses.

Strategies have been suggested to assist instructors with managing online instructional responsibilities. Strategies for minimizing instructor workload are linked to providing clear communication about course expectations, course assessments, working with others, and learner contributions to online discussions (Dunlap, 2005). Strategies used at the onset of the course included making the course available before the beginning date, providing schedules with project due dates, providing a forum for learners to ask questions about the course before the end of the first week, having a "scavenger hunt" to orient learners to course requirements, and providing access to course assignments, course discussions, and the course grade book. A study of adults (n = 67) in a blended learning environment stated that learners wanted frequent announcements and reminders, options for customizing learning experiences, and a variety of learning assignments (Ausburn, 2004).

Communicating with learners about their concerns is very important (Dunlap, 2005). Some learners may feel more comfortable with stating course concerns anonymously while others may prefer to communicate directly with the instructor. Using multiple forms of anonymous and learner identified communications with synchronous and asynchronous tools were suggested: discussion forums, email, chat, and telephone.

The instructor may want to set up specific times during the week to be contacted directly (email, chat or face-to-face) by learners. Guiding questions can be used to direct learner inquiry and gather formative course assessment information. Dunlap (2005) provided the following questions that instructor may use to guide learner inquiry:

- What questions or problems came up this week that will require further investigation?
- Are you experiencing any problems with key course activities—discussion, group work or projects? What are your suggestions for improving these projects?
- What activity was the most/least useful for this week? Why? How would you improve it? (p. 19)

As questions and answers are exchanged a frequently asked questions section can be created and shared with all learners.

Assessment is another area that is crucial in online learning yet can be time consuming for the instructor. Timely, detailed feedback serves to motivate, increase interaction, and help learners build understanding (Anderson, 2004a; Many et al., 2004; Vonderwell, 2003). Many et al. examined a graduate course on literacy education at an urban research university in the southeastern United States. The purpose of this qualitative study was to determine the nature of instruction in an online graduate course. Participants included the instructor-researcher and 16 teachers (15 female, 1 male). Findings indicated that the teacher participants in the study were surprised with the quality of the interaction. This concept was supported by the instructor who stated, “I know them better than I know the students in my on-campus courses” (p. 18). The instructor estimated that teaching the online course took twice the amount of time than teaching the same course in a traditional face-to-face format.

Learner self-assessment tools may serve to reduce instructor workload (Dunlap, 2005). Dunlap suggested that self and peer assessment tools can provide feedback to learners without increasing the instructor's workload. One assessment tool, "karma points," asks learners to evaluate the discussion contributions of other learners and assign a point value based on an assessment rubric (Dunlap, 2005, p. 20). The cumulative "karma" points can be used to assess participation and the criteria for the assessment rubric can be developed by the learners. Instructors can develop rubrics, checklists, tools, and guidelines to promote learner participation in self-assessment and peer-assessment. Anderson (2004a) noted the importance of giving directions and modeling how to write effective discussion postings. Providing activities that are relevant to adult learners is also important and communicates the message that the activities are an essential and meaningful part of the course. Another suggestion for facilitating and managing discussions was to rotate the responsibility for leading discussions among learners (Schrum et al., 2005). Strategies for workload reduction are summarized in Table 6.

Professional Learning Communities

Developing Learning Communities

A professional learning community is a supportive OLE for educators interested in improving their expertise in teaching and learning and to improve teaching practice and student learning (DuFour & Eaker, 1998). In this section, I discuss professional learning communities through the sense of community model proposed by McMillan (1996), through the community of inquiry model as proposed by Garrison et al. (2000), and through a mixed method study conducted by Ferdig and Roehler (2003).

Table 6

Workload Reduction Strategies

Strategies	Course organization	Learner assessment	Discussion facilitation
Provide clear and complete course syllabus.	✓		
Respond to concerns before they escalate.	✓		
Do not allow late work or extra credit.	✓		
Use karma points to involve learners in the evaluation of discussion contributions.		✓	
Provide learners with devices for reviewing each others' work.		✓	
Ask learners to develop "rules of engagement" contracts and determine ramifications of contract violations.		✓	
Allow learners to engage in discussions for a few days without instructor input.			✓
Ask learners to summarize discussions.			✓
Limit the number of discussion questions posted.			✓
Ask small groups of learners to facilitate discussions.			✓
Encourage learners to ask and answer their own questions.			✓
Connect learners to existing communities of practice.			✓
Meet synchronously with small groups of learners each week (when there are more than 30 learners in the course).			✓

Source: (Dunlap, 2005)

McMillan (1996) explains the principles of the sense of community model: spirit, trust, trade, and art. Spirit is focused on the spark of friendship that becomes the spirit of connections to others. The ability to be ourselves and to be reflected in others is also important. Spirit is about membership in the group. Truth is about emotional safety and the ability to communicate. The community needs to make sure that there is a safe environment for the exchange of ideas within the boundaries set by the community. Faith and acceptance are also part of truth as is "paying dues." McMillan believes that telling the truth is only achieved through sacrifice and challenge. Trust is related to the sphere of influence and power and also relates to the resolution of problems related to power. Trade is the economy of the group and members share in the wealth of the group. Each member of the group needs to make equitable contributions and without "keeping score," provide for fair trades or barter within the group economy. Art is the evidence of the shared history of the group. It is rich with voice and stories and needs the contact of the group to develop.

Another way to explore community is through the community of inquiry model. Garrison et al. (2000) present a framework for the development of a community of inquiry in a higher education online learning setting. The community of inquiry model is comprised of three intersecting parts: cognitive presence, social presence, and teaching presence. Cognitive presence is defined as the ability to "construct meaning through sustained communication" (p. 89). Social presence is defined as the “ability of participants in the community of inquiry to project their personal characteristics into the community" (p. 89). Social presence enables learners to visualize each other as real people and supports cognitive presence. Teaching presence encompasses the design and

facilitation of the course content, learning activities, and assessment. While design functions are typically the instructor's responsibility, the responsibility for facilitating learning can be shared with the participants in the community of inquiry. Teaching presence supports cognitive and social presence and embrace learning goals.

Garrison et al. (2000) used the three elements of the community of inquiry model (cognitive presence, social presence, and teaching presence) to develop a coding scheme template for analyzing text-based discussions. Cognitive presence was established through critical thinking and was marked by a triggering event, followed by perception, deliberation, conception, and action. The social presence categories included emotional expression, open communication, and group cohesion. Teaching presence categories included instructional management, building understanding, and direct instruction. The role of the instructor was to facilitate learning through content delivery, assessment, and feedback and to provide support for social and cognitive presence. Results of employing the community of inquiry model in a higher education setting lend support for the potential of developing critical reflection and discourse or critical inquiry (Garrison et al., p. 103).

In addition, social interaction is also important to the development of online learning communities. Ferdig and Roehler (2003) used mixed methodology to examine the social interaction of teacher candidates (n = 32) enrolled in reading methods courses taught in hybrid classes at a large Midwestern university. Ninety percent of the participants were White and female. Participants were placed into teams of four to view video clips about learning situations. They were then asked to participate in online discussions to exchange ideas about the clips with the expectation of selecting the best 10 of 20 clips.

Transcripts of the discussions were read and analyzed and two methods of viewing the data emerged: intertextuality and uptake. Intertextuality was defined as using multiple texts, experiences, and examples not mentioned in the clip. Uptake was defined as the ability to understand the concept presented and its relationship to teaching and learning. In this study uptake was said to have occurred if the participant was able to make connections between the video clips and teaching practice.

Discussion postings were analyzed into four categories: no uptake with no intertextuality, no uptake with intertextuality, uptake with no intertextuality, and uptake with intertextuality (Ferdig & Roehler, 2003). Each teacher candidate submitted a final paper as a portfolio artifact. Findings indicated that the quantity of posting did not have a significant relationship with the type of posting. The type of posting (uptake and intertextuality) was a better predictor of paper score. The authors point out that a major concern is making sure learners are actively engaged and contributing to the online discussion.

Ferdig and Roehler (2003) replicated the study with a larger sample (n = 331) from 12 universities and 5 classrooms. The authors used the same methodology and supplemented data collection with classroom observations, assignments, surveys and interviews. Findings from the second study mirrored the first with students that demonstrated high intertextuality and uptake showing greater depth in learning. Results also indicated that merely providing an opportunity for students to use online discussions does not necessarily result in learning. To make discussions work well, the curriculum, support structures, and instructional practice must be used to model the active exchange of ideas. Online classroom environments also influence the active exchange of ideas.

Online classrooms that supported sensitivity, responsibility, risk taking, trustworthiness, freedom, and constructivist teaching had higher levels of reflection occurring in discussions. Another finding indicated that discussions must be challenging and results indicated that instructional scaffolding should be provided when needed by the learner. Discussions that asked students to elaborate and extend ideas were more successful. One limitation in the second study was that the teacher's instructional approach was not accounted for in the research design. Because some classrooms were considered more "discourse friendly," this could have influenced the results.

To develop learning communities it is important to have teacher presence, cognitive presence, and social presence (Garrison, 1997). Having a sense of community provides support for exchanging ideas and engaging in social interaction (McMillan, 1996). The classroom environment should support learning through collaboration by providing a friendly, safe, atmosphere of trust (Ferdig & Roehler, 2003).

Building online community

Community building provides participants opportunities to share who they are with the goal of enhancing communication and learning (Palloff & Pratt, 1999). The essential components of community building are honesty, responsiveness, relevance, respect, openness, and empowerment. Shared goals and collaborative activities designed to reach the goals can help build community. Palloff and Pratt listed the following elements of a learning community: a clearly defined purpose, a distinctive gathering place (not place based), effective leadership from within, defined norms and code of conduct, a range of member roles and subgroups, and freedom for members to resolve conflicts.

Interaction is also important in creating a collaborative environment. Interaction can be a defined as communication among members of a learning community for the purpose of completing the learning goals (Berge, 2002b). Building community in online courses will help learners share resources and expertise (Bonk, 2001). Adult learners that grew up in schools where individual competition for the top grade was the prevailing paradigm may not be comfortable working in collaboration with other learners. These adult must be taught how to be collaborative and interactive (Conrad & Donaldson, 2004). Interaction and feedback allow the community of learners' opportunities to work together in an active learning environment and to create knowledge and meaning. The term "engaged learning" has also been used to describe active learning with collaborative partnerships of learners and instructors working together to construct knowledge and answer essential questions.

Active learning engages learners with authentic problems such as dilemmas, problems, and scenarios while challenging learners to find solutions to personally meaningful problems (Berge, 2002b; Conrad & Donaldson, 2004). Collaboration, teamwork, and shared goals are also powerful forces. Teamwork helps build relationships and provide simulated work environments suitable for testing new ideas. Collaboration allows physically separated learners the opportunities to share and create knowledge. Ideas can be developed collaboratively and meaning can be socially constructed. Learners should be guided to provide feedback to each other when working on joint projects and also to make connection with other learning communities (Paloff & Pratt, 1999). Limiting the number of collaborative projects in a course keeps learners from being overwhelmed. Having a mix of individual and small group assignments is an effective approach.

Summary

In this chapter, I described research related to professional development, online professional development, instructor beliefs, learning theories, adult learning theories, the implications of adult learning theories for online instruction, online instructor skills, online instructional strategies, concerns for online instructors, and professional learning communities. This study is based on the premise that online professional development can be an effective tool to help K-12 educators improve their practice and that instructor beliefs impact teaching and learning.

The literature reviewed in this chapter sets the context of the present study and delimits the scope. The present study was situated in an OPD environment and examined instructor beliefs. Although OPD is growing rapidly, there are not many studies that have been conducted in K-12 professional development settings nor have many studies examined the beliefs of OPD instructors about adult learning in an online setting. As the literature indicated, the study of beliefs is a difficult process; however rich insights for teaching and learning with adults can uncover insights to improve practice. While some researchers advise the use of one specific theory to guide instruction, others suggest using an eclectic approach and selecting the theory and strategy to best meet the learner's need. The literature reveals that there are many different theories (andragogy, transformation learning, self-direction, etc) that provide perspectives on the ways that adults learn. The literature sets the stage for the present study, and in the next chapter I examine the research design and methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The purpose of this qualitative case study was to explore instructor beliefs about the ways adults learn in OPD courses, instructor beliefs about creating online environments for adult learners, and instructor beliefs about instructional strategies for facilitating online learning with adults. The use of a qualitative case study design provided opportunities to gain a deeper understanding of instructor beliefs. This chapter provides a description of the methodology, the context of the study, participant selection, data collection procedures, data analysis procedures, the protection of human participants, the role of the researcher, and strategies to address the rigor of the research.

The following questions guided this study:

1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?
2. What are the instructor's beliefs about creating an online learning environment for adult learners?
3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Choosing the Methodology

Qualitative research seeks to understand and interpret a contextually located point in time (Merriam, 2002). Case study research is appropriate for investigating occurrences in real life settings where it is difficult to distinguish the boundaries between the

occurrence and the contextual setting (Yin, 2003). Case study methodology helps both researcher and reader understand complex interrelationships (Stake, 1995). This study was bounded by participation as an instructor in the OPD program of the King County School District, a large metropolitan school district in the southeastern United States.

I chose the research methodology on the basis of the research problem and questions I had framed (Merriam, 1998). A multiple case study design was chosen for this study for the best fit with the guiding questions. Five individual case studies were conducted to explore the unique beliefs of each instructor. A cross case analysis provided opportunities to examine commonalities among participants beliefs about adult learning, creating OLEs and instructional strategies to facilitate adult learning. Defining the case (Yin, 2003) and describing the boundaries of the case (Merriam, 1998) are integral components of case study research. Each instructor represented an individual case and was the unit of analysis for this study.

Context

Online professional development is a fairly new innovation in K-12 school districts. The site chosen for this study was the King County School District (KCSD), a large metropolitan school district in the southeastern United States. KCSD has offered online professional development courses since 2001 and continues to expand the variety and availability of online courses, thus providing increased access to online professional development opportunities for adult learners. KCSD is among the 30 largest school districts in the United States with approximately 8,700 teachers and certified personnel serving over 100,000 students. Certified faculty members have an average of 11 years of experience and 51% have advanced degrees.

Participant Selection

Three times a year approximately 12 to15 online professional development courses are taught in the KCSD. The increasing popularity of OPD courses has resulted in a greater need for new online courses and training for OPD instructors. This study began in the summer of 2006 with the purpose of understanding and describing the beliefs of OPD instructors about the ways adults learn online, creating OLEs, and instructional strategies to facilitate adult learning. For the purposes of this study, instructor beliefs are defined as implicit assumptions about teaching, learning, learners, learning environment, and instructional content (Kagan, 1992).

I requested and received research approval to conduct this study in the King County School District (Appendix A). At the same time a request was also made to the Institutional Review Board at Georgia State University (Appendix B). KCSD directed me to work with the school district's coordinator for online professional learning to develop a list of potential participants. A pool of nine potential participants was identified and purposefully selected by the coordinator for online professional learning and me. The criterion for purposeful selection was experience. Purposeful selection serves to focus inquiry on participants who will help the researcher develop knowledge, understanding, and awareness to best answer the research questions (Merriam, 1998). For the purposes of this study, an experienced instructor was defined as an instructor who had taught the same OPD course on at least one prior occasion. It was assumed that an experienced instructor has learned from prior experience with teaching the course and has had time to reflect and develop their beliefs about online learning with adult learners.

All nine experienced OPD instructors scheduled to teach a course during the summer of 2006 were invited to participate in the study (Appendix C). Three participants indicated interest in participating and were sent a thank you note (Appendix D). A second invitation was sent to non-responders (Appendix E) and two more participants expressed interest in the study. Five instructors (55% response rate) voluntarily agreed to participate in the study and all followed through on their commitment to participate in the study until its conclusion.

OPD instructors in the school district work in a variety of full-time jobs, such as classroom teacher, curriculum coordinator, media specialist, technology integration specialist, and professional development coordinator. The participants in this study were employed in different full-time jobs within the KCSD. For example, two participants worked as middle school media specialists (Susan & Heather), one participant was a middle school social studies teacher (Mary), one participant worked as an Instructional Technology Specialist (Grace), and one participant was a supervisor of technology professional development (Kim).

Each participant taught one or more OPD courses during the summer and/or fall semester of 2006. Susan taught *Microsoft-Word™* for two professional learning units (PLUs) during the summer and the course lasted for four weeks. Susan co-designed and developed the *MS Word™* course with a colleague who worked in KCSD's professional development department. Heather taught *Information Literacy Online* (five PLUs) in the summer over a span of 4 weeks and again in the fall over the span of 10 weeks. Mary taught two courses during the summer, *Hone Your Presentation Skills* (three PLUs) which lasted 6 weeks and *TechConnect* (five PLUs) which lasted 8 weeks. Grace co-

taught *Advanced PowerPoint* (three PLUs) during 5 weeks in the summer and 10 weeks in the fall of 2006. Grace co-developed and co-taught *Advanced PowerPoint* with a teacher colleague and course co-developer (who was not a study participant). Kim co-developed *Web Tools for Educators* with Grace Anders. Kim taught *Web Tools for Educators* (three PLUs) during the summer in a 3-week span of time. Kim and Grace reworked the course to offer it to paraprofessionals in a blended learning format for the fall semester. Blended learning combines face-to face instructional meetings with online instruction. The course was then titled *Web Tools for Para-educators* (three PLUs) and was offered over the span of 5 weeks in the fall semester.

Each instructor in this study submitted a course syllabus to the professional development department of KCSD. Then the OPD courses were approved and included in the online professional development catalog. Course descriptions provided guidelines and prerequisite skills that potential learners read prior to registering voluntarily for OPD courses. All courses offered by participants in this study met the minimum enrollment requirement of 12, registrants in order to be offered. OPD course enrollment is capped at 20 participants. The professional learning department provided technical support for instructors and course participants. Instructors were provided with a checklist outlining instructor responsibilities. Responsibilities for instructors began one week prior to start of the course, during the course, and after the course conclusion.

The OPD courses taught by participants in this study were not required for any of the adult learners who enrolled. All courses were available to adults who worked within the K-12 school district. Some courses required prerequisite technology skills and this was stated in the online course catalog. For example, *Information Literacy Online* was

recommended for school district personnel who had completed basic technology requirements for recertification. The description provided a list of courses that would qualify as prerequisites. Classified personnel with strong technology skills were also invited to register for this course. Even though OPD courses are not required, the majority of adults working within the school district are required to complete a certain number of hours of instruction for re-certification to continue working in their jobs. Online and blended learning course offering are one option for earning PLU credits. School district personnel may also earn PLU credits by completing face-to-face professional development courses or college courses, and also by attending educational conferences with course credit.

Data Collection Procedures

Data sources for this qualitative study included interviews, online instructor journals, and discussion postings. Two face-to-face interviews and one online interview were conducted with each participant. The face-to-face interviews provided opportunities for me to observe the instructor's verbal and nonverbal communication skills while the online interview enabled me to observe the instructor's written online communication skills. All interviews were digitally recorded after permission was granted by each participant. Appendix F contains the consent form used by participants to provide consent for audio recording. The second interview was conducted online via the text chat tool in the LMS used for all KCSD OPD courses. The text chat was digitally recorded and the digital text was used for data analysis. Each participant provided permission for me to record the data from the verbatim synchronous text chat log recorded in the LMS.

Appendix G contains the consent form used by each participant to allow digital text recording.

Interviews

This study was situated in an online instructional environment for adult learners and investigated the beliefs instructors have about the ways adults learn, OLEs, and instructional strategies for facilitating learning with adults. Seidman (2006) recommended using an in-depth approach to interviewing by conducting a series of three interviews. The first interview sets the context of the participant's perspective, the second interview asks participants to reconstruct their experience, and the third interview asks for a reflection on what the experience meant to them.

While interviewing shares some commonalities with having a friendly conversation, the explicit purpose, explanations, and questions are what set it apart (Spradley, 1979). I informed each participant about the purpose and direction of each of the three interviews that were conducted so that the interviews remained focused. I provided explanations about the purpose of the project and gained consent for digital voice recording and for taking notes during interviews. Different types of questions were used to direct the interviews. Descriptive questions, structural questions, and contrast questions provided a beginning point. Descriptive questions allowed me to hear the participant's language, structural questions provided a view of the way the participant organized their understandings, and the contrast questions allowed me to explore the participant's dimensions of meaning.

Spradley (1979) also suggested using other types of questions such as a "grand tour" question in which the interviewer asks the participant to reconstruct an event. An

example of a “grand tour” question I asked of participants in this study was, “take me on a tour of the ‘perfect’ OPD course for adult learners.” Spradley also suggested using “mini-tour” questions. A “mini tour” question is similar to the “grand tour” question but has a smaller scope such as reconstructing a specific time frame or experience. An example of a “mini-tour” question I asked of participants in this study was “take me on a tour of what it is like to be in the online learning environment you create for your students.” Other types of questioning approaches I used for interviewing included the hypothetical question, the ideal position question, and interpretive questions (Merriam, 1998). An example of a hypothetical question I used in this study was “suppose you were enrolled in the course you are currently teaching… what instructional strategies might help you the most. Participants were also asked to describe the “perfect adult learner” (example of an ideal position question). See Appendix H for the interview protocol with actual interview questions I used.

One final technique that was explored during the interviews was the card sort (Spradley, 1979). To employ this technique, I presented index cards (Appendix I) with brief descriptions of instructional strategies, theoretical frameworks, and definitions and descriptions of learning and effective instruction. Each participant was asked to choose a card that represented their views and to explain their rationale to me. Some participants chose bits and pieces of descriptions and statements from different cards to explain their ideas, thoughts, and beliefs. The card sort technique was useful for prompting discussions about theoretical frameworks, views of effective instruction, and instructional strategies for facilitating online adult learning.

Online instructor journal

Another data source was the instructor journal. Each instructor was asked to keep an online instructor journal that was accessible to me. This journal required a login and password. Each participant was asked to type brief notes to record ideas about the online teaching process, such as how online teaching challenges were handled, what kind of instructional strategies were used, what was effective, and what was ineffective. Online journaling provided the instructor with another opportunity to explore topics, such as examining the ways adults learn online, developing the OLE, and using instructional strategies. The instructor journals contained notes that were current (at the time of occurrence) and reflective (thought about later).

I read and coded the instructor journal notes within one week of the posting date. The contents of the instructor's notes provided topics for email conversations between the instructor and me. Excerpts from the postings were used to prompt discussion during interviews. A third data source was the discussion board postings made by each instructor in the OPD course they taught during the summer of 2006. Discussion board postings from OPD courses taught in the fall of 2006 were also used when available.

Discussion Board Postings

The interaction of the instructor with the learners through online discussion postings provided valuable data to address the research questions. Written communication between the instructor and learners gave the researcher insight into the instructor's beliefs about the ways that adults learn in an online environment and about instructional strategies that can be used to facilitate adult learning.

Data Sources Linked to Sample Research Questions

Each data source provided insight to address one or more research questions. While the interview data provided the most in-depth detailed information, each data source was important. Table 7 provides a list of data sources linked to sample research question that each source addressed. Table 8 provides the timetable used for data collection.

Data Analysis Procedures

Data were analyzed using a constant-comparative method (Glaser & Strauss, 1967). From themes that emerged from the data analysis of the first interviews, I developed the beginning code list using a generative recursive process. A peer debriefer read the initial interview transcripts, reviewed my initial code list, and discussed the process used to clarify, expand, or collapse the code list. I met with the peer debriefer three additional times to discuss the coding scheme and to comment on my developing understanding of the data. The peer debriefer asked questions that prompted me to discuss the data. Through this process, I considered new ideas and developed a deeper understanding of the data. As codes developed, I began writing analytical memos that assisted in the data analysis process. Charmaz (2006) describes the memo writing process as “a pivotal intermediate step between data collection and writing drafts of papers” (p. 73). Writing memos prompted me to explore different ways of thinking about the data. Memos were read and reread throughout the data analysis process and continued during the writing of the case studies.

Table 7

Data Sources Linked to Research Questions

What do I need to know?	What kind of data will answer the question?	Type and nature of question, discussion prompt
Instructor's beliefs about instructional strategies	interview questions; card sort; instructor notes; discussion postings	• Tell me about your online class… describe an instructional strategy that works well. • Suppose you were enrolled in the course that you are currently teaching… what instructional strategies might help you the most? • Take a look at the following cards and select one instructional strategy and discuss it with me.
Instructor's beliefs about ways that adults learn	interview, instructor notes, discussion postings	• Can you describe one of your online teaching experiences? • What impact did this experience have on the learners in your course? • Describe the "perfect" adult online learner • Describe the "typical" adult online learner • How can an OPD instructor challenge the "typical" students to move toward becoming "perfect" adult online learners?
Instructor's beliefs about creating an OLE	interview questions; instructor notes; discussion postings	• Take me on a tour of what it is like to be in the online environment you create for your students.

Table 8

Data Collection Timetable

Method	How	Where	Date	Who is responsible?	Data transcription
First interview	FTF	Public location	First 2 weeks of course	Researcher	Within 48 hours of interview
Second interview	Online	Within LMS	Mid-course	Researcher	Within 48 hours of interview
Online Instructor journal	Electronic notes	Instructor's choice	Through the summer of 2006. Some participants continued in the fall of 2006.	Researcher codes notes within 1 wk	Researcher –begin transcription within 1 wk
Third interview	FTF	Public location	Within a 3 wk time span of the end of course date.	Researcher	Within 48 hours of interview
Discussion board postings	Online	Within LMS	Throughout the course	Researcher	Throughout the course
Email conversations	Online	Via email	During course	Researcher & Participant	Within 48 hours of receipt

Note. FTF = face-to-face. LMS = learning management system.

As I developed the initial codes, I provided further clarification about the meaning of each code, listed an alternate instance if one was available and listed an example of the code directly from the raw data. For example the initial code list included the codes communicating with the learner, inviting the learner, connecting with the learner, and responding to the learner. These codes were collapsed into one conceptual category, *connecting with the learner*. I clarified (defined) the term as,

> Being available, being present in the course, attending to the learner, communicating, engaging, interacting, inviting, responding, and reaching the learner. The instructor may use different teaching styles to accomplish this. Or from the learner's perspective this could be connecting with other learners.

The beginning code *assessing the learner* morphed into the code *knowing the learner*. This code was used to describe the process of the instructor getting to know the learner, developing an understanding of what is important to the learner, and seeking to understand the learner's needs, preferences, and learning styles.

Data were managed using a Microsoft Access (2003) database that enabled easy sorting and resorting of codes and coded data. As codes were expanded and collapsed, a Microsoft Excel (2003) spreadsheet was used to track code changes and update code definitions. It was also used to double check current codes and definitions. The Microsoft Excel spreadsheet also served as a cross reference to the codes listed in the Microsoft Access database. The Microsoft Excel spreadsheet was used to create a finer grained analysis of codes and themes, such as instructor beliefs and instructional strategies.

Protection of Human Participants

All Institutional Review Board policies and procedures for the protection of human participants were followed. Permission to conduct this study was received from the university and the school district. Each participant was asked to sign a consent form and received a copy of the signed form. Participants' identities were protected with the substitution of pseudonyms in place of their real names. The name of the school district where the study was conducted was changed to a pseudonym.

Role of the Researcher

For this study, I acknowledge that experiences as an adult online learner, course developer, and instructor for online professional development have led to the formation

of beliefs about online professional development for adult learners. I also work in the school district where the study took place and have co-developed and taught a county-level online professional development course.

I was the primary instrument for data collection and analysis, and I have attempted to minimize bias through reflexive journaling, conducting member checks, and by engaging in an active conversation about the study with a peer debriefer (Merriam, 2002). In these ways, I have worked to maintain neutrality.

Rigor in Qualitative Research

To insure rigor in qualitative research, it is important to address credibility, dependability, transferability, and confirmability (Guba & Lincoln, 1981). Credibility was addressed in this study by prolonged and persistent observation, peer debriefing, triangulation across data sources, member checks, and checks for structural coherence and referential adequacy. At the same time, dependability was strengthened by checking to make sure that the results made sense in the context of the data collected. Strategies used to improve dependability included: triangulation, peer examination, investigator's position, and audit trail (Merriam, 2002). As part of the audit trail, I kept a reflexive journal to record notes that explained how I arrived at the results. The journal included details about the collection of data; how themes evolved, how codes were formed, and the decision making process that I followed.

I hope that the reader's ability to transfer or generalize results from this study will be strengthened by the in-depth description of the study's context (Merriam, 2002; Mills, 2000) and by the rich, thick description that was used to help the reader determine ("see") if a match can be made in order to transfer or generalize from one study to another.

Strategies used to enhance confirmability included triangulation of data sources and practicing reflexivity. I engaged in reflexivity to attempt to reveal the assumptions, biases, worldview, and the rationale for making the choices in the study.

Summary

Through a qualitative case study approach, I explored the beliefs of five OPD instructors about the ways adults learn in OPD courses, about creating OLEs for adult learners, and about instructional strategies for facilitating online learning with adults. Based on a review of the literature, this study addressed the dearth of studies about the beliefs of instructors about online learning for adults. The context of the study was a large metropolitan school district and the study specifically explored the beliefs of five OPD instructors. Both the topic (OPD instructor beliefs) and the context (OPD in a K-12 school district) will add to the small number of studies that exist in the literature base.

Data were collected through multiple sources including interviews, online instructor journals, and online discussion board postings. Data were analyzed through a constant comparative method beginning with the development of an initial code list. Codes were refined and the process of analytic memo writing assisted me with developing new codes and different ways of thinking about the data. Interaction with a peer debriefer, reflexive journaling, and the use of member checks helped me maintain neutrality and served to strengthen the credibility, dependability, and confirmabilty of the study. Chapter 4 will introduce the five individual case studies that follow in Chapters 5 through 9.

CHAPTER 4

INTRODUCTION TO THE CASE STUDIES

The purpose of this chapter is to provide an introduction to the five individual case studies that follow in Chapters 5 through 9. The purpose of this study was to explore in each case the instructor's beliefs about adult learning in online professional development courses, the instructor's beliefs about creating OLEs for adult learners, and the instructor's beliefs about instructional strategies that facilitate online learning with adults.

This study was guided by three questions:

1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?
2. What are the instructor's beliefs about creating an online learning environment for adult learners?
3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Beliefs are defined as implicit assumptions about teaching, learning, learners, learning environment, and instructional content (Kagan, 1992). Instructional strategies are the means, processes, and procedures used to encourage and promote learning.

The five participants in this study participated in three in-depth interviews during the summer of 2006. The first and third interviews were conducted via face-to-face meetings, while the second interview was conducted via text chat within the LMS used for teaching online professional development courses in the King County School District.

KCSD granted me permission to conduct the study in April 2006 (Appendix A). Data collection began in June 2006 and was completed in December 2006. Each participant volunteered to participate in the study and indicated consent to participate by completing an informed consent form (Appendix J). Each participant agreed to allow the audio taping (Appendix F) of the face-to-face interviews and also to allow the text recording (Appendix G) of the interview conducted via online text chat.

A qualitative case study research design was chosen for this study based on the need for an in-depth exploration of each instructor's beliefs in the real world context of teaching an OPD course. Case study allows the researcher to explore complex topics in contextual settings (Merriam, 1998). Because the research questions in this study focused on the beliefs of each instructor, individual case studies were the most appropriate choice. Each individual case study represents a portrait that emerged from my reflexive and reiterative process of examining the data, consulting with a peer reviewer and going back to reconsider the data. The process of writing each case study began first through the development of a data coding scheme. Codes were developed and defined and then expanded, combined, and condensed. I consulted with a peer reviewer as the code list was developed and refined and as the meaning making process occurred and continued. Data were analyzed using constant comparative analysis and the "portrait" (case study) of each instructor was written in first draft form. Each first draft was discussed with the peer reviewer and rewritten. The second draft of each case study was sent to the research participant to check for accuracy in the way each instructor's case study was presented. Only minor revisions were made. For example, slight changes in wording of direct

quotations. Participants found the revisions acceptable and felt that the written portrait in each case study was a fair appraisal of their beliefs about adult online learning.

The five individual case studies are presented in Chapters 5 through 9. Chapter 10 presents a cross case analysis that compares the beliefs of all five participants and examines the seven themes that emerged from the data. Chapter 11 provides a discussion that links back to the literature reviewed in Chapter 2 and also considers other literature in the context of the findings. Then the implications of the study are presented along with recommendations for future research.

All quotations will follow the original source material. Direct quotations from textual sources of information such as the discussion board, the text chat interview, the instructor journal or course announcements will be indicated via the following notation: [verbatim discussion board posting] or [verbatim synchronous text chat] or [verbatim instructor journal posting] or [verbatim course announcement] or [verbatim course information]. Textual sources will be presented exactly as written regardless of mistakes in grammar, punctuation or spelling. The next section of this chapter will briefly describe the data sources used in the study.

Data Sources

Interviews

I interviewed each participant three times. The first and third interviews were conducted in a face-to-face setting. Four of the five participants (Susan, Kim, Heather, and Mary) chose to meet for interviews at a restaurant or a coffee shop and enjoyed a beverage, snack, or light meal during the interview. This provided a relaxed environment for both the participant and me. One participant (Grace) preferred to meet at Northeast

High School in the media center and because all of the interviews took place in the summer months, the school environment was quiet and relaxing. All participants provided consent to allow me to record each interview for transcription and for data analysis.

Interview two was conducted synchronously via the text chat tool in the LMS so that I could meet each participant in an online context. This allowed me to view each participant's online communication style. Denzin (2004) stated,

> Online research molds traditional qualitative research methods to the Internet environment. This environment encompasses a variety of venues and spaces, including e-mail, chatrooms, web pages, listservs, various forms of "instant messaging," MUDs and MOOs, USENET, newsgroups, audio and video exchanges (p. 1)

At the time the study was conducted, none of the participants had used the synchronous chat tool within their OPD courses; however, each instructor was successful with using the chat tool to meet with me. Some participants experienced difficulties with the online chat interview. For example, Mary has a sticky spacebar that caused words to run together and caused frustration. Mary and Heather experienced "disconnects" from the chat room and had to log in a second or third time. Susan, Kim, and Grace experienced no difficulties with the chat interview and appeared to be comfortable in the online setting. All participants provided consent to allow me to use the digital text recording (chat transcript) for data analysis.

Online Instructor Journal

Each participant was asked to record notes in an online journal. Instructor journals were kept by Susan, Kim, Mary, and Grace. The number of postings in each journal varied from one posting by Grace to five postings by Kim. I made comments about the instructor's postings, yet none of the participants used this data source extensively.

Discussion Board Postings

I examined all of the discussion board postings made by each instructor in their respective OPD course(s). All postings were analyzed and helped me reflect on the themes emerging from the data. Viewing the discussion board postings provided a "window" that allowed me to view the communication style and see the actual ways that each instructor interacted with the adult learners in their OPD course. Communication style included the tone and content of the messages and their use of emoticons (keyboard characters used to represent emotions) or other means to draw attention to the words such as the selective capitalization of words.

E-mail

I communicated with each participant via e-mail to clarify and confirm that my tentative interpretation of the data represented the beliefs of the participant. Conducting member checks to confirm the plausibility of my interpretation strengthens the validity of the study (Merriam, 1998).

Presenting the Case Studies

Each participant in the present study was given a pseudonym to protect their identity. The five case studies were sequenced by my interpretation of each instructor's theoretical beliefs according to Jonassen's (1991b) continuum of learning from objectivism to constructivsm. In order to understand beliefs about learning, OLEs, and instruction, it is important to understand the influence of theory and its impact on instruction (Ertmer & Newby, 1993; Jonassen, 1991b; Shunk, 1996). On one end of the continuum is objectivism with a view of the learning that is focused on the transmission of knowledge from the instructor to the learner. On the other end of the continuum is

constructivism with a view of learning that is created or constructed by the individual learner.

The role of the instructor changes with the progression along the continuum and most theorists fall in the middle of the continuum (Jonnasen, 1991b). Jonassen states, “since learning obviously entails constructivist and objectivist activities, the most realistic model of learning lies somewhere on the continuum between these positions.” The purpose of this chapter was to provide an introduction to the five individual case studies that follow in Chapters 5 through 9.

CHAPTER 5

SUSAN

"I treat people as I would like to be treated –
with kindness, respect and a this-isn't-brain-surgery attitude."

Susan James began her career in education as an elementary language arts teacher. After teaching a Title I reading class, she was inspired to pursue a Master's degree in reading. Susan was hired to teach high school reading classes in the King County School District in 1977. Susan's continued interest in reading led her to certification and a job as a school library media specialist. For the past 16 years, Susan has worked as a middle school media specialist, and 14 of those years she has worked at South Middle School in King County. Susan's experiences with facilitating adult learning began as she worked one-on-one with individual learners. As online resources began to proliferate, Susan began training groups of adult faculty members. She felt it was important to provide resources and tools to help adult learners continue their learning and exploration beyond the point of training. For example, Susan created course notebooks that included screen shots to guide learners with space for taking notes.

In high school and college Susan was a passive learner, sitting and being "lectured at." As an adult learner, Susan enrolled in *TechConnect*, an OPD course that was developed in King County to help teachers meet the state technology requirement for teacher certification. Susan liked many things about *TechConnect* and learning online, such as working at her own pace, choosing the location and time to work, and having the

freedom and flexibility to choose the time to complete assignments. With the successful completion of the *TechConnec*t course, Susan's instructor encouraged her to consider becoming a part-time OPD instructor. Susan took a required instructor training course and began teaching *TechConnect* online. After teaching *TechConnect* several times, Susan was invited to collaborate with her *TechConnect* instructor to develop and teach a new course on using Microsoft Word™. The course was first offered in spring 2004 and continues to be offered each semester. Demand for the course has increased and Susan is one of three instructors teaching the course.

Adult Learning in OPD Courses

Susan views learning as an active and interactive process. Learning is indicated by a change in meaning that is stored in memory. Helping learners make connections to prior knowledge is very important. Learning takes place through the completion of authentic tasks completed in meaningful contexts and involves persistent effort. Susan told this story about an adult she knew:

> She would take a class and learn how to do something and a month later she would ask me how to do something and I would say well you had that class. She'd go, well if you don't use it everyday, you know, you don't remember how to use it. . . . I said to a point that's true, and after that you have to make the effort, the conscious effort to draw from that memory.

Adult learners may learn and forget, review and remember. One strategy embedded in Susan's course is that skills learned in earlier sessions are used in sequential sessions so that learning is cumulative and skills are used and practiced. Using new skills helps reinforce learning, a belief based on behaviorist learning theory. Susan sets the expectation that skills learned in session one will be practiced and applied in sessions two through six. Each week learners are encouraged to incorporate skills from previous sessions into their new assignments.

Using tools is another way to empower learners to review and remember content. Learning to use tools can assist learners with building competency and establishing independence. Susan is passionate about teaching and modeling the use of the help button in Microsoft Word™ because she feels that is important for learners to understand how to find the answers to their own questions rather than relying on the instructor for help. This concept becomes even more important after the course is completed and the instructor is not readily available to the learner. Susan said [verbatim discussion board posting]:

> One thing to keep in mind is that you don't necessarily have to remember exactly how to do everything. Help in MS Word is very useful. Now that you know what is out there and what you can do, just go to Help if you can't quite remember how to do something. Next to Undo, Help is one of my favorite buttons!

Teaching learners how to locate helpful tutorials is another way to empower learners to become more independent.

Adult learners need to take responsibility for their own learning. Susan feels that the amount of time and effort a learner puts into their work is obvious to the instructor. She believes that adults can learn to become comfortable through practice and by practicing new skills they can become fluent in them. Newly gained fluency has the power to open new worlds for the learners and can lead to independence. Empowered learners can use learning to improve their lives.

Another way to empower learners is to encourage them to develop the mental habits to think about their thinking or metacognition. The instructor can help the learner think through their learning process. Through reflection, each learner can clarify their thinking and learning processes and develop metacognitive awareness and understanding. Learners who have developed their metacognitive skills are more effective with planning, organizing and assuming responsibility for their own learning. Susan stated, “online

learners need to have a certain independence and willingness to help themselves." Susan encourages learners to think metacognitively by modeling her personal thinking processes and by helping learners mentally walk through and troubleshoot any difficulties with understanding course content and assignments.

Adults can develop skills and attitudes to help them learn better in OPD courses. Susan describes adult learners as being like "big kids" who "are not always as adult as we think they are." Problems that adult learners experience include frustration. For example, learners may become impatient when they do not receive immediate feedback from the instructor. Misunderstandings and mistakes may occur when learners do not follow instructions and do not read the content thoroughly. Adult learners also skip steps when going through tutorials and sometimes this leads to problems with assignments. Learners also have problems when they have "extenuating circumstances" that prevent them from turning in assignments on time; and when learners get behind in their work they may end up dropping the course. Susan was asked to describe the "perfect" and the "typical" adult online learner. Susan's responses are summarized in Table 9.

Learning for adults needs to be meaningful to them in their workplace. Learners should be able to adapt the content to reflect their workplace needs and the end products of instructional tasks and assignments should be meaningful to the learner. End products that the learner can see themselves using are much more meaningful to the learner. One assignment in the course asks learners to create an online form with dropdown menus, a skill that Susan believes learners are not as likely to use. Susan describes the submissions for this assignment as the "least creative response" as compared to other course assignments.

Table 9

Susan James' Beliefs about Adult Online Learners

Regarding	"Perfect Learner"	"Typical Learner"
Attitude toward learning	Open to learning new ideas	May have some problems adapting the content to the job setting
Feedback to the instructor	Will email for help before spending unnecessary hours trying to figure something out on his/her own	May apologize about asking questions; need encouragement to ask questions
Motivation	Puts time, thought, and effort into their work; goes beyond the basic requirements for assignments.	Does what is required without embellishment
Participation	Submits work on time; will read instructions	Misses something in the instructions which causes them to omit a required element
Reading	Reads content thoroughly	Does not read thoroughly

Creating Learning Environments in OPD

The OLE is influenced by the instructor's beliefs about the way adults learn online and by their beliefs about the role of the instructor within an OPD course. Susan believes that it is important for the instructor to know the dynamics of online learning and instruction and the ways that adults learn. Susan believes that the instructor should support, encourage, and nurture learners. Sharing a passion for learning, striving to provide a safe, respectful, and friendly environment for the learner, and providing a positive, friendly attitude toward learners frames the learning environment in the MS Word course that Susan teaches.

Susan wants learners to be successful, to create MS Word documents that they can be proud of, and to reflect positively on the course. With this in mind, Susan provides positive feedback, praises the exemplary aspects of work submitted, and responds to

learners in a kindly manner. Learners that submit work with missing elements or work that needs improvement are given an opportunity to revise and resubmit their work. When this happens, Susan sends the learner an email to explain what is missing, incorrect, or needing revision. So far all learners who have been asked to revise and resubmit their work have done so. Susan explains that they could take an "unsatisfactory" on an assignment yet stated that this has not happened.

Providing feedback and evaluating learner work is also an important part of establishing successful communication in the OPD learning environment. Susan uses one rubric to evaluate course assignments and another rubric to evaluate required discussion board postings. If an assignment is missing parts or needs any revisions, Susan returns it to the learner without using the rubric. Instead she waits and uses the rubric to evaluate the revised assignment. Learners who resubmit assignments often make positive comments about Susan's feedback, indicating that the feedback helped clarify their understanding of the content.

Another way that Susan contributes to building a positive environment for learning is by modeling enthusiasm and passion for learning. Through sharing passion and enthusiasm with learners, Susan hopes that each learner will leave the course with an increased understanding of numerous features of MS Word. Some of the features Susan wants to share with learners include drop caps, adding pictures to Word art, readability, auto-summarize, tabs, leader tabs, and using pull quotes. Susan wants learners to understand how these features can simplify their work while adding a more professional quality to the documents they use in their work setting.

One way to support the learner is for the instructor to be aware when learners have problems. It is not easy for the online instructor to determine when learners are having problems unless the learner communicates with the instructor. Susan stated [verbatim instructor journal], “Online, you have to wait for those who are having problems to contact you since you can't tell they are having problems unless they do contact you - and they don't always do that.” Susan encourages learners to communicate, and ask questions. Susan wants the learner to know that communication helps the instructor support the learner’s growth and understanding of the course content.

Communication and support occurs through a variety tools, for example via email and via the telephone. Susan wants learners to contact her via email and is available via telephone to assist and support learners. For many learners, the MS Word course is the first online course they have taken and they are not comfortable with asking questions. Susan counters this discomfort by encouraging learners to ask questions. She states that if they were in a face-to-face class, they would not apologize for asking a question and the same concept applies to online learning. Another technique Susan uses to make learners feel comfortable is to check to see how learners are doing. She asks about their weekend, how things are going, and provides a social element to the course. Susan says, “we may be working online, but we are still people.”

Learning requires the persistent effort of each learner according to Susan. Yet sometimes learners have difficulty learning and become frustrated with assignments. Susan mentioned that learners have a lot of trouble with one specific assignment, the grouping and ungrouping of graphics. Susan does not want learners to become frustrated with any assignment and thinks it is time to re-evaluate and revise this assignment with

better directions and an easier process. Rather than “blaming” learners, Susan identifies the assignment as the problem and plans to solve the problem by revising the course content.

Another concern for Susan is to challenge the advanced learners to continue to learn without frustrating the average learners. Susan has discovered that by being a flexible instructor who enjoys teaching and learning, she opens the door to learning with and from learners. Flexibility as an instructor has helped strengthen the ability to challenge the advanced learners. Susan states,

> As far as flexibility goes, we have some discretion about what is acceptable and what isn't. For example, one time a student wanted to use Excel instead of Access for the mail merge assignment. I gave her the green light since it was a learning experience for me. Maybe that is the key—the more we can help and provide support, the more we as instructors learn, also.

As she encourages and supports learners and extends opportunities to adapt and refine course content, Susan increases her own learning and provides alternate ways of doing things that assist learners. The role of the instructor as a facilitator of learning supports learner interest in the content and ability to “discover” new things.

Susan’s role as an OPD instructor is to support, encourage, and nurture learners as each learner puts forth the effort to learn. Nurturing occurs as Susan strives to make each learner feel comfortable and safe by treating each learner “with kindness, respect, and this isn’t brain surgery attitude.”

Instructional Strategies to Facilitate Online Learning

An instructor’s beliefs about instructional strategies for facilitating adult learning are complex. Views about instructional strategies are entwined with views about the ways adults learn online. Susan believes that learning is an active and interactive process and is

indicated by a change in meaning that is stored in memory. Helping learners make connections to their prior knowledge is very important. Learners may learn and forget, review and remember. Empowering learners to answer their own questions is also important.

As an instructor and co-designer of the MS Word course, Susan employs cognitive instructional strategies, such as chunking data, using bold text, highlighted text, and color accents to help learners' process information and make sense of the content. Cognitive instructional strategies help the learner make connections between prior knowledge and new knowledge resulting in enhanced memory storage, retrieval from memory, and maximized learning. Learners can be introduced to tools that will help them learn, such as the help button in Microsoft Word.

Learning involves persistent effort and occurs through the completion of authentic tasks conducted in meaningful contexts. This conception of learning is supported by a constructivist viewpoint. For example, Susan believes that learning can also be enhanced as the learner practices new skills within the context of meaningful assignments.

Susan maintains that the course content needs to be organized and presented in a consistent manner. Using consistent deadlines for all assignments helps learners remember, organize, plan, and complete work in a timely manner. For example, all MS Word course assignments are due on Sunday night. On Monday, Susan begins sending out feedback to learners who may need to revise and resubmit their assignment. Susan sends out gentle reminders about assignments due and feels that the tone and wording the message conveys to the learner is just as important as the message itself. Susan gives extra tips, tricks, and advice as the course progresses. For example, Susan mentioned this

tip she had shared with learners: “Did you know if you check/hide the spelling errors before you save a document that when you send it out to someone it hides the little red and green lines.”

Clear communications is also important. Providing clear, easily understood instructions and making the instructor’s expectation known are crucial components of an effective OPD course. Susan noticed that learners misunderstood a few things about course procedures, such as the requirements for discussion postings. After reflecting on this problem, Susan felt she needed to make learners more aware of her expectations before the course begins. Susan also implemented the use of discussion partners which increased the quantity and caliber of discussion postings. For example, Susan paired learners as discussion partners and expected them to respond to each other through required discussion postings. When Susan reminded one learner to respond to her partner via the discussion thread, she discovered that the pair had been discussing the topic via email rather than using the discussion board to post their ideas. Susan was surprised by this and responded with a positive comment to compliment their communication efforts while emphasizing the importance of following the course procedure (posting to the discussion board). Susan attributes an increase in the interaction and engagement among learners to the use of discussion partners. Susan stated, “there is more ownership in their discussions and more willingness to go beyond the two postings required each week.”

Providing feedback to learners is an important instructional strategy for facilitating adult learning. Positive feedback can encourage learners to feel successful and take more responsibility for their own learning. Explanatory feedback can help the learner distinguish and develop their own approaches for problem solving. Susan

maintains that corrective feedback is also useful in cases where the learner submits incorrect responses to assignments. Learners are always given opportunities to correct and resubmit their work. Susan deems it important to explain to a learner "why" they received a particular rating on an assignment. Through the provision of feedback to the learner, Susan makes suggestions rather than mandates that give one "right" way of solving problems or approaching the content. In this view, Susan recognizes that each learner must figure out their own best way to learn and solve problems. Another helpful instructional strategy that Susan employs is modeling. By modeling her personal learning processes, Susan demonstrates how she learns. For example, Susan describes how she uses the help button in MS Word to learn how to do many things and to solve many problems. Susan believes in empowering learners with content, tool, and resources. She does not expect learners to remember everything they learn; rather, she wants them to have the tools and resources to find what they need when they need it.

Summary

Susan James believes that online adult learning is an active process indicated by changes in knowledge stored in memory. Completing authentic, meaningful tasks helps learners make connections between prior knowledge and new concepts, in turn helping the learner add to and modify their stored knowledge. Adult learners may learn and forget, review and remember. Practice with using new skills aids in memory storage. Through the development of metacognitive awareness, the learner can plan, organize, and develop positive attitudes towards learning. Adult learners often seem to be like "big kids" who need immediate feedback, do not read and follow directions, skip steps in tutorials, miss deadlines, and often have "extenuating circumstances" that cause them to

fall behind and potentially drop an OPD course. Connecting learning with the workplace makes learning meaningful for adults. Content should be adaptable according to the needs of the learner.

The instructor should know how adults learn and should provide support to encourage and nurture learners. Susan provides positive feedback, responds in a kind manner, provides opportunities for revising and resubmitting assignments, and communicates clearly and considers these techniques effective for establishing a positive learning environment. Learners are encouraged to ask questions and the instructor should respond to learners and help them feel comfortable and safe. Communication from the instructor such as asking how learners are doing adds a social element to the course. Learning requires persistent effort. The instructor needs to check on learners to make sure they do not get too frustrated. Assignments that frustrate learners need to be examined and revised. Learners need to be challenged to discover and explore. Flexibility helps the learner and the instructor learn more. Adapting content to match the learner's needs is a good idea. Learners should be treated with kindness and respect.

Cognitive instructional strategies help learners process and make sense of the content and strengthen connections with prior knowledge so that learning can be maximized and storage and retrieval from memory enhanced. Learning about tools and resources that are useful in a work setting (authentic settings) and practicing newly developed skills helps learners enhance memory. Organized course content and consistent deadlines help learners remain organized. Learners should have opportunities to revise and resubmit work and should receive thorough feedback from the instructor. Clear instructions and expectations help the learner remain focused. Instructional

strategies that enhance interaction and engagement create learner ownership of the content. Each learner may approach a problem in a different way and there is more than one right way to solve a problem. Modeling learning processes helps learners see content connections from different viewpoints. Empowering the learner with tools and resources helps the learner develop independence.

CHAPTER 6

HEATHER

"Success for an adult learner is taking what they've learned and passing it on. I think that's kind of it in a nutshell."

Heather Gilbert is a middle school educator at heart and is completing her eighth year as a school library media specialist at King County Middle School. According to Heather, at King "work is never boring, always active, and rich with learning opportunities . . . where technology is booming and I am learning, learning, learning! Practicing and integrating information literacy skills are everyday occurrences at King." Heather credits her 8th grade English teacher and her elementary school librarian for motivating her to become an educator. Heather earned a Bachelor of Science degree in English Education and worked as an 8th grade English teacher. Heather fondly remembers her elementary school librarian as a woman who loved her job, children, books, and searching for information. Heather's love of reading and her interest in the research process led her to pursue her Master of Library Science degree. She was motivated and completed the degree program within a single year.

Heather describes herself as a voracious reader and life-long learner. She is passionate about sharing and discovering information with others, including adult learners. Heather began working with adult learners when her ideas for several summer workshops were accepted by a coalition of small school districts. She developed and taught four different, 1- or 2-day workshops on Microsoft Word, Microsoft Excel,

Microsoft Access, and Internet searching. In addition to teaching staff development workshops, Heather has conducted presentations at numerous professional conferences. Her first experience with OPD occurred when she took the information literacy course in summer 2005.

Heather finds online learning convenient and enjoys choosing the actual time and the length of time to spend on learning. As an online learner, Heather likes to print course content information to read at her leisure. While reading, she underlines and takes notes. After completing the OPD course, Heather was asked by her instructor to consider becoming a part-time OPD instructor. She accepted the invitation, took the required instructors course, and has been teaching the course that she excelled in as a learner, *Information Literacy Online*. Heather enjoys teaching and learning online and feels the LMS used for OPD courses is a sound system that works well for instruction.

Adult Learning in OPD Courses

Heather views learning as an active process requiring mental and physical effort. Hands-on problem solving approaches to learning are the most effective. Learning requires interaction, peer involvement, and discussion and cannot be accomplished in isolation. Learners gain new insights through sharing. Prior knowledge is good starting place for learning but is not always present for all learners at all times. The instructor can build on the prior knowledge of learners to help them make connections with the content. According to Heather, there are a variety of correct yet different answers that learners can find by using different approaches to problem solving. Learning is stored and for learning to occur, the knowledge or information must become part of the learner's memory and part of their knowledge base. Heather warns that memory can be faulty and sometimes

the learner can use knowledge, skill or strategy to trigger memory. Some learners may use mnemonics devices to help them organize information to store in memory. Interaction, peer involvement and hands-on strategies enhance learning and build on the cognitive organizational strategies used to enhance memory. Learners who make personal connections with the learning are "owning the learning," according to Heather.

Once learners begin to connect and communicate within an OPD course, they begin to have ownership and can become really involved in the course. The role of the instructor is to nurture and encourage learners to be successful. Learners achieve success through their own work and efforts and success helps stimulate learner motivation. The instructor should provide challenges for learners to help them stay motivated and involved in the course and to keep them interacting with each other and with the instructor.

Increasing motivation and establishing a comfort zone for learners is also important. Motivating learners is the key to effective instruction. Motivated learners working in a comfortable environment will take responsibility for their own learning. Learners will let the instructor know if they are having problems and will help the instructor see their viewpoint. Learners become part of the course through connecting with the content, communicating with their instructor and peers, and by making contributions. This increases the comfort zone, supports learner willingness to take risks, and extends learning beyond current boundaries. Heather thinks that this process empowers individual learners and has the potential to move beyond individual empowerment to promote societal change.

Adult learners want learning to be useful. Learning that can be applied within the learner's job setting is more meaningful to adult learners. Both the context of learning

and the context of applying learning are important. Contextual applicability or being able to take what is learned and apply it in the context of the job setting is a crucial part of learning for adults. Without contextual applicability the learner will not get involved in the course. Adult learners need to be able to use what is in the course in their professional environment. The practical application of knowledge is the most important part of taking an OPD course. Heather states, "it's not take the course and be done. It's take the course and use it." Adult learners in K-12 education should be able to use their learning in lesson plans, classroom delivery, and in interactions with other professionals. The knowledge gained from OPD courses should serve to increase student achievement and to make things easier and more effective and efficient for student learners. Heather feels that the learners in her course will take what they learn and find the "best fit" for teaching their students. She has confidence in learners' abilities to adapt and create what they need to teach their students.

In addition to practical application of learning, the instructor's beliefs about the nature of adult learners are important. Adult learners bring a high level of professionalism to learning. Many adult learners are used to having someone else guide them through learning rather than knowing how to direct themselves. Taking an online course like *Information Literacy Online* requires learners to be more independent and self-directing in learning. Heather noted that this approach seems to be very different for some learners.

Heather indicates that each learner has a specific learning style or combination of styles that indicates the most effective ways in which they learn. Learners who have knowledge of their "best" style can choose appropriate learning strategies. Heather thinks adult learners are "just like kids in a way" while still acknowledging that adult learners

are more mature than classroom students. Learners need clarification, reassurance, and positive reinforcement. Heather observed that the "achievers" often want the most clarification, and she is not quite sure if this is a result of their "personality" or if they want to present themselves well by making sure their work is good. Adult learners bring "baggage" that Heather describes as family, personal, and work situations. Baggage can affect learning. For example, adult learners are often juggling work, home, self, and the online course while being tired after working all day.

The role of the instructor in an OPD course is as a facilitator of learning and not as a "dictator." Even though Heather is a subject matter expert in regard to the course content, she believes that she is also a co-learner in the course. Heather learns a lot from course participants and feels that participants learn a lot from the course. Heather maintains that as an instructional facilitator she should be flexible, open to alternatives, and offering suggestions rather than making demands of learners.

Heather was asked to describe the "perfect," and the "typical" online adult learner. Heather replied [verbatim synchronous text chat], "Is there one?!" When asked to consider the perfect learner as an adult learner who excelled at online learning, Heather provided the descriptions that are summarized in Table 10. Heather believes that the instructor can challenge the "typical" learner to move towards becoming a "perfect" learner through communication, encouragement, and support, as well as by building a safe learning environment.

Creating Learning Environments in OPD

The online learning environment is influenced by the instructor's beliefs about the way that adults learn online and by their beliefs about the role of the instructor in an OPD

Table 10

Heather Gilbert's Beliefs about Adult Online Learners

Regarding	"Perfect Learner"	"Typical Learner"
Attitude toward learning	Wants to learn and values the insights of others; truly interested in the course; flexible	Takes the course because the course "looks" interesting and they need PLU credits
Commitment	Committed to the course	Do not have a sense of commitment (time, energy, work) to the course (learning)
Feedback	Willing to revise work as needed	Somewhat willing to revise work
Learning goals	Learn as much as possible from the course and from peers and the instructor	Learning goals are not as clearly defined
Motivation	True interest in course; not motivated by the need for PLU credits	Some interest in the course; motivated by the need for PLU credits
Participation	Contributes thoughtfully to discussions; Completes assignments thoroughly and on time	Offer discussion but do not go beyond what is required;

course. Heather believes the instructor should, "foster an atmosphere or professionalism, and freedom to think outside the box." Because this may be the first course [online or otherwise] that learners have taken in a while, the learner may need to "change gears" and get into "student mode." Learners also need to gain comfort with the LMS. Learners are provided tools and assignments (within the first course session) to help them acclimate to the OPD environment. If learners have difficulty with an assignment, the instructor can offer further explanation or clarification; or the instructor can revise, reword, or add additional steps to the directions. It is also important for learners to

become comfortable with the technology that mediates the OPD course and the content of the course.

Learners may also need help with time management. Learners have deadlines to submit their assignments. While some learners submit their work early, some are slightly behind, and others submit their work right on time. Heather noted that learners may have difficulty pacing themselves to get work finished to meet course deadlines. Heather feels this may result from a misconception regarding the amount of work involved in an OPD course and the time the learner may need to complete the assignment.

In addition to developing skills for managing online learning, creating a safe environment is important. Online courses need a safe, focused place for learners to exchange ideas. This safe environment establishes a “location” for learners to focus on improving their instructional practices. Heather asserts that the instructor can be influential in establishing the environment by encouraging learners to develop, “a sense of “we're in this together" so students feel they can make mistakes and always be accepted.” According to Heather, learning should focus on sharing rather than on competing.

Learners also contribute to establishing the environment through unique contributions to their own learning and to the learning of others. The instructor can help establish a positive learning environment through being personable and helping learners get to know one another. Heather states, “even though online learning can be impersonal, the instructor needs to maintain as much of a personal touch as possible.” Heather provides the personal touch through positive email communications, encouraging remarks via discussion postings, and by sharing the good work completed in the course.

Heather states [verbatim synchronous text chat], “we all like to be praised and encouraged, sometimes I think educators need it a lot, because publicly we are often battered.”

The instructor’s tone influences the learning environment. Heather believes that learner mistakes can become learning opportunities in a learning environment where all learners are treated respectfully. It is also important for the instructor to make sure that each learner is respectful of the differing viewpoints expressed by course participants. Heather personalizes the learning environment by using keyboard characters or emoticons to support emotions and by sharing personal details to humanize the environment.

Helping learners get to know each other is an important step toward making the environment comfortable for learners. During the first session of the course, Heather asks each learner to introduce themselves in the first discussion posting. As learners share and get to know each other, they begin to build cohesiveness. This process is very important because learners do not see each other or meet together. Learners begin to see similarities between themselves and other learners or with the instructor. The instructor can get to know the learners by reading and making comments to discussion postings. Heather strives to identify with something personal about each learner in order to build an instructor to learner connection. This introductory “icebreaker” activity gives learners an opportunity for self-expression and a chance to get accustomed to making posts to the discussion board.

Getting to know the learner is another way to foster a positive learning environment. The instructor needs to “learn about the learners.” For example, the instructor can find out the learners’ personal interests by asking questions and by finding out what

books they are reading. The instructor can find out what the learner wants to learn and how they plan to apply their learning. The instructor can also develop a sense that, “some [learners] need to be stroked, some need to be encouraged, some need a friend to understand and grant a little leeway, some need to be able to accept others' views as of equal value.” Heather understands that each learner has a different skill or expertise with technology, vocabulary, and education. Synthesizing the information gained about each learner, Heather uses it to [verbatim synchronous text chat], “know who to push harder, who is more "fragile" in that areas, who can do better, who has maximized what they will achieve.” Then she matches her interaction style according to her perception of the learner. Heather states [verbatim synchronous text chat], “I offer suggestions for improvement-gently to some, more rigidly to others.”

Instructional Strategies to Facilitate Online Learning

An instructor’s beliefs about instructional strategies for facilitating adult learning are complex. Views about instructional strategies are entwined with views about the ways adults learn online. To examine Heather Gilbert’s beliefs about instructional strategies, it is also important to understand Heather’s views on how adults learn. Heather views learning as an active process requiring mental and physical effort. Learning is stored in memory and becomes part of the learner’s knowledge base. Instructional strategies such as mnemonics can help the learner organize information for efficient memory storage and for effective and easy memory retrieval. Heather asserts that motivating learners is a key component of effective instruction. These views of learning are based on a cognitivist perspective. Learners must connect with the content, communicate and interact with other learners, and make contributions to the course in order to have ownership of the course.

Learners gain new insights through sharing. This view of the learner as an active participant engaged in creating personal understanding through interaction with other learners is consistent with a constructivist view of learning. As learners connect, communicate, and construct knowledge, they are empowered and actually become a part of the course. The process of empowering learners for social change is a view consistent with transformational learning theory.

It is also important to examine Heather's beliefs about the course content and assignments. Assignments should be appropriate to the learner, practical, applicable, and challenging for learners but not beyond the learners' capabilities. The instructor should check to make sure that all learners understand and complete assigned work. Providing a variety of assignments suited to different learning styles keeps the course interesting for learners. Delivering the content through a variety of media is also important. For example, the course content in *Information Literacy Online* is delivered through MS PowerPoint presentations, streaming video (or via video download), Websites, and text documents. Although much of the course content is visual and viewed via a computer screen, auditory learners can print the content and read it aloud. Clear, obtainable goals help learners stay on track.

The instructor should provide clear obtainable goals to provide direction for learners and to focus the course. Heather states:

> Part of the instructor's responsibility is to have some goals for the course and some things that they would like the students to come away with as a result of the course and then build assignments and activities on those goals that are relevant to that. Then you have a direction with the course, you have guidelines for the course, and you have benchmarks for student success.

Goals provided by the instructor provide direction for the course. According to Heather, the course she teaches is well structured because it builds on previously learned content. As learners become comfortable with the content then new content is added. Providing an interesting and manageable course structure serves to motivate learners and keep them involved with the course.

Heather uses a variety of instructional strategies to support learners (e.g., different types of feedback). Heather provides evaluative feedback to let learners know what she thinks about the correctness of their response. She also uses informative feedback to provide additional resources to assist learners with gaining a deeper understanding of the content and different approaches to applying the content. By providing extra information identified as "food for thought," Heather encourages learners to think reflectively. Using reflective questioning, Heather asks learners to see different viewpoints by changing the context or the circumstances. For example, she asks how the learner might apply or adapt newly learned concepts in their job environment.

Encouragement and praise can support and motivate learners. Heather encourages and praises learners and shares examples of excellent work completed by learners. She shares techniques that worked successfully for specific learners. Another instructional strategy that Heather feels is effective is to provide milestones for learners. For example, at the beginning of the course Heather communicates with learners and says "You are on the way" to indicate that their learning journey has begun. Midway in the course she might say "You are halfway through!" and toward the course conclusion she may comment, "You have almost successfully completed the course!" Feedback, encourage-

ment, praise, positive communications, and the use of milestones are instructional strategies for supporting learners and learning within an OPD course.

Reminders and cueing the learner are also effective strategies. Heather reminds learners about upcoming assignments and due dates. She uses email, course announcements, and the discussion board to send reminders. Learners are reminded that their classmates are counting on them for the timely submission of their collaborative assignments. Learners are given practical advice to help them monitor their time and work deadlines. For example, Heather suggests that all learners print out an assignment check-list to keep track of the work that they complete. Heather also sends out tips to remind learners to use each weekly assignment as an opportunity to construct part of the culminating project which is due at the end of the course. Heather highlights the technical tips that are provided throughout the course. Technical tips are aimed at assisting learners with technical issues like downloading and saving files to their computer. Heather provides directional cues to tell the learner where to look, and provides clarifying comments to explain instructions better. For example, by restating the directions, rewording the directions, or adding extra steps to the directions, instructors may increase learners' understanding and comprehension. Sending multiple reminders is also a good idea. Heather sends updates to learners to inform them about upcoming events and activities or to provide ideas on what to expect from a particular assignment.

Interaction and collaboration help engage learners and encourage the exchange of ideas. Collaboration facilitates learning among learners and the instructor. One tool that is useful in developing interaction and collaboration is the discussion board. Heather states,

> They get ideas from each other they piggyback onto one another's ideas, they get new insights through that sharing and everything and then I can

> comment back and you know offer maybe some other thoughts about some things or offer something a little different that they might consider.

Insights, sharing different perspectives, and building upon the ideas of colleagues are a few of the ways that learners interact through online discussion postings. The instructor can interact with the learner as learners interact with each other. For example, the instructor can post reflective comments to encourage learners to think from differing viewpoints and perspectives, to consider new ideas, and to employ new ways of thinking. Heather believes that the discussion boards are integral to learners' "becoming part of the course."

Yet not all learners achieve this level of interaction with the course content, other learners, and the instructor. Heather noted that some learners give only "surface treatment" (general responses) to the content while some learners provide more detailed treatments or in-depth responses to the content. Learners making the in-depth responses can better describe how their learning relates to their jobs. Sometimes "surface treatment" can run throughout the course for a particular learner. Other learners who begin to see the applicability of the course content to their job setting can make a transition toward more in-depth treatment of the content. Heather feels that the overarching purpose for teaching the course is to enable learners to take the theoretical and make it practical and applicable.

Heather noted that some learners had difficulty with comparing and contrasting two research process models. Many learners only described one model in depth and this made it difficult to compare and contrast the two models. Heather is still reflecting on this assignment, considering options for modifying the assignment, and thinking about using

a different instructional strategy to assist and engage learners. Heather wants learners to be successful. She states,

> A success from an adult learner is taking what they've learned and passing it on. I think that's kind of it in a nutshell—because if they are able to pass it on, they understand what they've done. If they want to pass it on, they're satisfied with what they've done. If they feel they need to pass it on –they've found value in what they've done.

Adult learners are successful online learners when they find value in what they are learning. This occurs when learners can apply what they have learned in their job setting.

Summary

Learning is an active process requiring mental and physical effort, interaction, peer involvement, and discussion. Content and information can be organized to assist learner storage and retrieval. Prior knowledge is a starting place for learning and the instructor can build on this knowledge. Learners who make personal connections with the content and with other learners begin to "own the learning." The instructor provides challenging learning opportunities to keep learners involved and motivated. Motivating learners is the key to effective instruction. Adult learners want learning to be useful and also want to help students increase their learning and achievement. Adult learners have different learning styles, and varying levels of self-direction in learning, maturity, and interest in learning. Adult learners have many other obligations including work and home that may influence their voluntary commitment to complete an OPD course. The instructor is a subject matter expert, facilitator, and a co-learner in the course and should be flexible, open, and make suggestions rather than demands. The instructor should support learners in a comfortable learning environment.

Providing a comfortable, safe, supportive, focused, positive, and professional learning environment helps learners feel supported. Learners may be new to online

learning and may need to become familiar with the LMS including tools such as discussion boards, content, and assignments. Online learning takes time and time management skills. Rather than being competitive, the OPD environment should be supportive, providing an atmosphere that supports cooperation and collaboration. Adult learners need to be praised and encouraged and know that their ideas are valued and respected. The instructor needs to get to know each learner to determine how to help each one according to their interests and needs.

Heather's views of adult learning in OPD courses are framed by cognitivist conceptions of learning. Learning is active and requires mental and physical effort. Learning is stored in memory and certain strategies can help learners organize learning for effective retention and recall. Heather believes that learners interact, make connections with one another and with the content, and construct personal meaning, a conception of learning that is supported by constructivist learning theory. As learners connect, communicate, and construct knowledge they become empowered, a view consistent with transformational learning theory.

Providing variety through different types of assignments and delivery media accommodates learners with different learning styles. Clear, obtainable goals direct learners and help keep them focused on learning the content. The course structure should be interesting and manageable for learners. Heather communicates with learners by providing feedback to confirm their understanding of the content. Providing additional resources for learners is another type of feedback that extends learning. Asking reflective questions allows Heather to engage learners in reflective thinking about the course content and to consider ways to apply newly learned ideas. Heather encourages and

praises learners and shares examples of good work. She uses milestones to indicate progress through the course and aims to keep all course communication positive. Heather reminds learners of deadlines, gives them technical tips, provides directional cues, and presents clarifying comments to assist learners. When some learners give only “surface treatment” of the content, Heather tries to get learners to consider the contextual applicability of their learning while encouraging them to delve deeper. When learners have difficulty with an assignment, Heather spends time trying to think of ways to improve the assignment for present and future learners. Successful adult online learners find that what they learn is valuable, useful and can help them at work.

CHAPTER 7

KIM

"It is my responsibility to nurture that learner so that
they are successful—and I do that every time."

Kim Presley taught middle and high school reading, English, and Scholastic Aptitude Test preparation for 19 years. During that time she became interested in computers that had been purchased to assist students with writing. Her interest in technology grew and led to the completion of a Specialist degree in Instructional Technology. In 1998, Kim became a technology trainer and course developer for the King County School District. She was involved in selecting and teaching one of the first OPD courses purchased from Apple Computer. With the success of the Apple OPD courses, Kim was asked to develop a new online technology course to meet the state requirements for technology proficiency linked with teacher certification. Kim co-developed and taught this course in 2001. As Supervisor of Technology Professional Development, Kim coordinates technology training programs and still finds time to develop, teach, and train. Kim tells her adult students [verbatim course information], "Because I love to train, I still dabble in training teachers and staff. I guess once a teacher, always a teacher. ;-)"

As a student, Kim felt that she was not taught well and was not engaged as a learner. This experience inspired her to become a different kind of instructor–an instructor focused on engaging learners. Kim occasionally lectured as a means of presenting content to former middle and high school students; however, she always

included collaborative assignments to increase student interaction. Kim stated, “I was always stepping outside the box to deliver instruction because I wanted my kids to be successful.” In addition to teaching in middle and high school classrooms, Kim is an experienced online learner and online instructor. The same interest and desire to engage the learner is readily apparent when Kim speaks about adult learners.

Kim was influenced by her role as an online learner in three university courses taught by three different professors. Kim never received any feedback or communication from her professors. Instead, she could only see posted grades without comments from the instructor, so Kim never knew what questions she answered correctly and what questions she answered incorrectly on quizzes. Kim felt like a “number” rather than a person because there was no camaraderie, no support, and no rapport. Kim states,

> As a teacher and as an online developer and an online teacher, I felt like the college professors were not giving me the time of day. I felt like it was much easier for them to teach that course whereas when I teach online I find that it takes a lot more of my time than face-to-face because I am responding to everybody, I’m reading every posting. I don’t always reply to every posting. When something moves me to reply I do. But I never heard from those college professors. They never replied to our postings.

Kim’s experiences as a learner, teacher, professional development designer, and OPD instructor have shaped the many ways that she interacts with and supports learners in OPD courses.

Adult Learning in OPD Courses

To Kim Presley, learning involves new concepts and variety and must have application for the learner regardless of what type of job the learner holds. Learning needs to be authentic and meaningful for learners. Learning is an active process that requires interaction with peers through discussion threads. Networking with colleagues empowers learners. Kim stated, “here is South King County talking with East King

County talking with West King County talking to North King County going WOW! I wish I had talked to you before." Kim maintains that learning requires the persistent effort of the learner, learning is stored, and information needs to be structured and organized for learners. Shining through Kim's communication with learners is the idea that learning is fun; similarly, Kim views learning as one facet of life. Kim encourages each learner to embrace and enjoy both life and learning.

Kim views teachers as natural learners and wants them to be successful with OPD courses. While some learners are suited to online learning others are not. Kim stated, "some people are just not online learners, they have that touchy feely, face-to-face, I want to have a person in front of me, I got to ask a question and I want an answer right then" [approach or attitude]. Kim describes many online learners as self-directed, self-motivated, and self-sufficient, while other online learners are described as needing help and "hand-holding." Some groups of learners (e.g., paraprofessionals) may need more support than others. Providing the right amount of support and hand-holding is important because too much hand holding by the instructor can result in the learner's not taking ownership of the course work and the skills needed for its completion. Finally, Kim described some learners "that you will never reach no matter what you do."

Attitude towards learning is important and varies among different learners. Kim feels that learners who physically travel to attend a face-to-face professional development course make more of an effort to participate in learning activities and are more receptive to learning than are many online learners. Kim sets a goal to make sure that each learner has a successful online learning experience, and to achieve this goal Kim tries to help learners develop a positive attitude toward learning. When Kim is successful in getting

learners to the end of a course she finds learners are often surprised at all they have learned. Kim stated, "now, at the end of most online courses, I find the attitude is WOW - I really learned something."

I asked Kim to describe the "perfect" and the "typical" adult online learner. Kim replied that the "perfect" adult online learner was "nonexistent." When asked to define the "perfect learner" as an adult learner who excelled at online learning, Kim provided the descriptions that are summarized in Table 11.

Gaining learners' attention at the beginning of an OPD course is an important way to engage learners and create interest in the course. Several of the OPD courses Kim teaches are about using technology tools. Kim finds that if learners have a little skill with technology and she can give them more, then they "are easily hooked." Once the hook is set, Kim strengthens the bond by making connections with each learner based on their experiences, their background and their interests. Each learner brings a different level of technological skill, a different experience level with OPD, and a different degree of commitment to their own learning, something that Kim calls "buy-in."

Creating Learning Environments in OPD

The online learning environment is influenced by the instructor's beliefs about the ways that adults learn online and by their beliefs about the role of the instructor within an OPD course. In looking at the world, Kim is concerned that it has become a 21st century skill to be isolated–not just in learning, but in life. Kim stated,

> We've talked about isolation and you know we talk on cell phones and we go home and get our remotes and we get our TV and there's a lot of isolated activities now. . . . Is that going to be a 21st century skill where everybody [is in their own world] and they don't talk to each other and you can't carry on a conversation anymore?

Table 11

Kim Presley's Beliefs about Adult Online Learners

Regarding	"Perfect Learner"	"Typical Learner"
Attitude toward learning	Thirsty to learn, conscientious, best foot forward, not afraid to fail, willing to explore and search for answers to their questions	Sort of interested in learning, does just enough to get by, won't venture outside the box, want quick and easy answers
Beliefs about OPD	Recognizes that learning takes time, effort and commitment	Think that online learning is fast, easy and won't require much time commitment
Feedback to the instructor	Gives great feedback, helps the instructor zero in on what is needed	May question the instructor's comments
Learning goals	Wants to learn in order to impact students and bring them into the 21st century, doesn't see learning as a burden	Looking for quick professional learning unit (PLU) credits
Motivation	Self-motivated, OPD is something they want to do	Somewhat motivated, OPD is something they have to do to maintain certification
Participation	Provide thoughtful responses in the discussion board, submits assignments on time and well done	Provide short responses in the discussion boards, may submit assignments late, may ask for an extension, may offer excuses, and may have to redo assignments
Reading	Reads assignments and course content thoroughly	Does not read assignments and content thoroughly, asks questions that they could have answered themselves if they had read thoroughly

Kim discusses the topic of isolation with learners and emphasizes the importance of interaction and participation. Kim stated [verbatim discussion board posting], "An important component for an online class is to NOT work in isolation. Join in the Discussion Board (DB) by posting thoughtful responses (review Assessment Rubric for

DBs) and replying to colleagues." Encouraging interaction among learners and the instructor is one way to establish the "the human touch" in an OPD course. Another method for overcoming isolation is to continue to encourage learners as they progress through the course. Kim connects with learners through "wordy emails and encouraging them to speak keeps them social. I try to treat them professionally. . . after all, they are." Kim strives to treat all people equally regardless of their job description; she uses keyboard characters to represent emotions, called emoticons; encourages new and experienced online learners to persevere; and celebrates milestones as learners progress through the course. Throughout the course and at the course conclusion, learners have many opportunities to share their learning experiences.

A key component for building a successful online learning environment is to make sure that learners feel comfortable being open and honest. Kim stated, "I hope I provide a light atmosphere where they feel they can talk and ask questions and not be raked over the coals . . . like some instructors can do . . . they are still people and they are adults . . . no shame!"

Another way that Kim builds the environment is through nurturing learners. Learners need to be nurtured and Kim does this naturally by treating her learners like they were her children. She also tries to treat learners the same way that she would want to be treated. Kim recognizes the importance of learners' feeling good about themselves and their accomplishments. Some learners may be frustrated and need help, while others need "that little nudge, that little urge to get out of the nest and fly." A readily available OPD instructor can reassure and assist learners with building self-confidence. As an instructor, Kim appreciates the hard work and effort of learners. Kim encourages each

learner to do relaxing and enjoyable things such as taking a walk, playing with their children, or reading a book. This encourages an integrated view that learning is one component of a happy and healthy life.

To become successful with developing the online learning environment, Kim believes that instructors need to "pay attention" to the kind of learners in their course, to strive to understand what learners are interested in learning, and to develop a sense of what each learner would like to get out of the course. The online learning environment can be established through establishing the "human touch" and through encouragement, communication, equal and professional treatment, nurturing learners, appreciation and paying attention to learners' needs.

Instructional Strategies to Facilitate Online Learning

An instructor's beliefs about instructional strategies for facilitating adult learning are complex. Views about instructional strategies are entwined with views about the ways adults learn online. To examine Kim Presley's beliefs about instructional strategies it is important to understand Kim's views on how adults learn. As adult learners interact with new concepts, learning occurs and is stored within the learner. Learning is an active, engaging, and social process that occurs in authentic contexts. As learners engage in conversations with their colleagues, they develop new ideas, use the course content to solve problems, find connections between what they know and what they are learning, and find practical applications for what they are learning through the social exchange of ideas. These views are supported by constructivist learning theory.

Each learner has specific skills (including technology skills), background knowledge, and experiences that influence their learning experience. While some learners

are self-directing and self-motivated in learning, other learners may need more support and encouragement from the instructor. As an OPD instructor, Kim asserts that it is her job to learn about the skills, interests, needs, and goals of each learner. Kim gets to know learners through their introductory discussion postings and continues to observe the ways that learners interact with each other during the first 2 weeks of a course. Kim uses this knowledge about learners to construct collaborative groupings by pairing a talkative learner (one who posts frequently and openly communicates) with a silent learner (one who does not communicate much). The grouping is completed with one other learner with a communication style in between the other two.

The instructor is also responsible for shaping instruction and using instructional strategies to gear learning to the needs of learners. The instructor should use a variety of instructional strategies that generate learner interest and give learners opportunities to interact with the content, with the instructor, and with each other. Kim views the OPD instructor as a facilitator of learning and as a co-learner in the course. Each learner should share what they learn with the entire class, including the instructor/facilitator, so that everyone benefits. Kim tries to "hook" learners by making connections with learners' interests and backgrounds. By using individualized feedback, the instructor helps each learner move to a higher level of understanding of the course content. The OPD instructor can also help each learner develop a deeper understanding of the ways they learn the best. As each learner better understands their own learning processes, they independently plan for their own future learning opportunities and make choices of the learning environments that will best serve their learning needs. For example the learner may

choose an online format, a blended format (online and face-to-face), or a face-to-face format for future learning endeavors.

Assignments should not be given as busy work or as something for the instructor's sake. Assignments should help learners understand the content and establish how the content is applicable in their work context. Another way to make learning meaningful for adults is to give them choices so that they can make selections based on what they would most like to learn. Sharing what is learned allows learners to reflect on the learning processes and perspectives of other learners. It is also important to accommodate different learning styles, such as using strategies to engage visual learners (e.g., MS PowerPoint presentation) or using auditory tools for auditory learners.

Content must be organized, structured, and presented to learners in ways that are meaningful to them. According to Kim, learners need consistent, recurring organizational structures to help guide them through a course. Sequencing instructional content from easy to progressively more difficult serves to help adults learn more effectively. Much of the *Web Tools for Educators* course that Kim co-developed uses cognitive structuring of content, such as chunking, providing examples, and using a consistent order of presentation in each session.

Collaborative learning is an instructional strategy based on constructivist learning principles. Collaboration is an important strategy for adult learning that leads away from linear thinking towards creative thinking and problem solving. Kim views collaborative learning as an effective instructional strategy for adult learners. Collaboration hits creative places so that learning is not all abstract or not all concrete. It creates branched thinking, encourages learners to generate new ideas, and engenders excitement,

enthusiasm, and engagement with the content. To make collaboration work effectively, Kim pre-selects the members for each learner group and suggests that each participant select a role to play in the group. Having structure in the collaborative group may help equalize the group and prevent one person from “railroading” or controlling the group. Kim believes that “you get those who really love and embrace collaboration because they’re that kind of learner” while others might prefer to work on their own. Kim mentioned prior successes with implementing collaborative learning in face-to-face professional development courses and in one course taught prior to the beginning of this study. Although Kim strongly believes in collaboration, the large number of dropouts from the *Web Tools for Educators* course made this strategy difficult to implement. Kim stated [textual instructor journal]

> The class started at 16 . . . fell to 12 . . . then to 9 . . . only 3 finished, and 2 of those attended class every Thursday night for 5 weeks. I don't know what the answer is . . . but we have got to stop the huge dropout rate in online learning.

Summary

Kim Presley views adult learning in online settings as an active process that requires learner interaction with meaningful content in authentic settings. Course content for adult learning must be meaningful and applicable in the learner’s job setting. Many adult learners are self-directed and self-motivated in learning, while other learners will require more support from the instructor.

Kim encourages and supports learners in a comfortable environment where they can safely offer their ideas without fear. Kim provides the “human touch” through interaction, the use of emoticons, and providing feedback to learners to overcome the isolation often associated with online learning environments. Kim strives to treat all

people equally regardless of their job description. Kim nurtures learners and helps them feel successful.

Kim's views of adult learning in OPD courses can be framed by constructivist learning theory. Learning is an active, engaging, and social process that occurs in authentic contexts with meaningful tasks that have application in the job environment. Learners interact with each other to share ideas, solve problems, and make new connections. The instructor's job is to learn about the skills, interests, needs and goals of each learner; and to shape instruction by using instructional strategies geared toward learners' needs. Content should be organized and structured in meaningful ways. Kim uses cognitive strategies to organize and present content. Finally, collaborative learning, a constructivist strategy, can encourage creative thinking, such as generating new ideas. Collaborative learning also engenders excitement, enthusiasm and engagement with the content.

CHAPTER 8

MARY

"Invite people to learn. Embrace what they bring to the table.
Celebrate their successes."

For the past 4 years Mary Birdwell has been teaching 7th grade social studies students at King Middle School in the King County School District. Prior to returning to the classroom, Mary served as an instructional lead teacher at neighboring Scott Middle School where she was actively involved in developing and implementing professional development training for teachers. Mary's interest in teaching adults began after the completion of her Education Specialist degree in 1986. For the past 17 years, Mary has worked as an adjunct teacher at local colleges and has taught face-to-face and OPD courses for King County. It is not surprising that Mary is an energetic and enthusiastic person who loves teaching and learning.

Mary is a self-aware learner. She knows that her learning style is firstly analytical and secondarily self-expressive. She describes her own learning as "somewhat impulsive" yet "persistent." Mary often jumps right into learning without reading directions thoroughly. Mary attributes her personal success with learning to persistence and commitment. The first time Mary took an online course she felt lost. Mary described this experience, [verbatim synchronous text chat] "Whew . . . the FIRST time I did online, I was SO confused because it was very linear and I am often all over the place. Therefore, I strive to EXPLAIN to folks how things work." As a result of this experience,

Mary has great empathy for the learners enrolled in her OPD courses and devotes time and effort to making learners comfortable in the online learning environment. Because Mary was invited to co-develop and teach an OPD course for King County, she has kept busy teaching a variety of OPD courses.

Mary loves the freedom of teaching online and she shares the benefits of OPD as she teaches from various locales in her travels. Mary became an OPD developer and instructor because she wanted to "branch out" and try something new. Mary is proud of being involved with the first group of local school district course developers and instructors. Mary cited the importance of having supportive OPD instructors while she learned about developing and teaching OPD courses and stated, [verbatim discussion board posting] "loving, encouraging, and positive instructors are who encouraged THIS old girl to take the train the trainer course for online instruction! :0 " Mary works to be this type of instructor who supports learners in an inviting, positive, and kind way.

Adult Learning in OPD Courses

Mary views learning as process of building personal meaning from experience. Learning is about making connections. Mary stated, "It's making connections with your students. It's helping the students make a connection with the content and then relating the content in a connection to the outside world where it is relevant." To make connections with learners, Mary uses a personal, invitational, teaching style to support learners. According to Mary, research on both learning and the human brain support the conception that the instructor should engage the learner's emotions (limbic system) in order to reach learners cognitively.

Mary thinks it is important for the instructor to acknowledge the rich experiences that adult learners bring to the teaching and learning setting. This perspective includes both formal and informal learning. For example, Mary recognized the rich learning experiences involved in parenting [verbatim discussion board posting]: “Parenting gives you a great perspective on teaching, and vice versa. You'll be surprised at how much experience you've garnered in your home classroom!” Acknowledging learner competence is an important consideration when teaching adult learners. Mary stated, “adults are competent in multiple areas and wish to be recognized as such.” Adult learners need to be treated respectfully. Mary stated, [verbatim discussion board posting] “I know adult learning theory! We're independent, capable and come to the table with myriad talents and experiences. Some need guidance and encouragement, all need praise and recognition. No one needs admonishment.”

In addition to acknowledging learner experience the instructor’s beliefs about adult learners is also important. Adult learners bring their own unique experiences to the OPD setting. Mary describes this as [verbatim synchronous text chat], “Positive or negative. Productive or destructive. Savvy or naiveté.” While some learners are effective online learners, others are not. Mary stated, [verbatim synchronous text chat] “They don't GET online OR they do. They don't understand technology and don't use it . . . Or they do and this is an effective, practical way to take a class.” Mary identifies learners who are having difficulty, provides examples of “great work” to help those who are struggling, and points toward other people within the learning community who can help them learn effectively.

Mary was asked to describe the "perfect" and the "typical" online adult learner. Mary noted that there is not one description of a "typical" adult learner, rather there are a variety of ways to view adult learners. Mary provided the descriptions that are summarized in Table 12.

Instructors should facilitate learning rather than demand learning. As an OPD instructor, Mary is strongly opposed to assuming an "autocratic" or "directive" stance with adult learners and feels that the instructor needs to listen to learners, and to seek learner feedback and input. Through reflective observation the instructor can assess each learner, acknowledge each learner's experiences, and make sure that learners are not "railroaded" by the instructor. The concept of "railroading" was described as being controlling (telling people what to do and how to do it), and trying to be "in charge of everything." A facilitative instructor listens and asks learners to contribute as the learning community takes root.

Table 12

Mary Birdwell's Beliefs about Adult Online Learners

Regarding	"Perfect Learner"	"Typical Learner"
Attitude towards learning	Disciplined	A number of situations could reflect the "typical learner" 1. Someone who is looking for an easy course and/or someone who does not want to sit in class 2. Someone who is happy with online and are good at it 3. Someone who has no idea what they are doing
Motivation	Self-motivated, chooses to achieve or overachieve	Someone who needs course credits, does the basics to get by
Technical skills	Tech savvy	Savvy enough to use modern ways

Learning requires participation from the learner and interaction among the participants, from what is available in the course and from the instructor. It is important for the instructor to be active in the course and responsive to learners. Mary feels that it is important to build rapport with learners by commenting about the ideas that learners share and by helping learners make connections. Mary thinks that adult learners want to see their OPD instructor interacting with them through discussions. The instructor can and should engage the learner through relevant content, positive affirmations, and by establishing a comfortable learning environment.

Creating Learning Environments in OPD

The online learning environment is influenced by the instructor's beliefs about the way that adults learn online and by their beliefs about the role of the instructor in an OPD course. Mary views the role of the instructor as a facilitator of learning who invites the learner to learn and embraces and celebrates learning as it occurs. Mary describes the process of making connections with the learner:

> You have to engage their emotions, you have to invite them to learn, you have to make them feel comfortable, you have to make it relevant to what they are doing, you have to empower them–all the information is available to them and then they can learn to use it.

Providing a comfortable environment is necessary to support learning and helps support the development of a community of learners who can work together to help each other. A comfortable online environment can be developed by closing the distance and isolation that may be experienced by learners in OPD courses. This can be accomplished by helping learners acclimate to the learning environment, encouraging learners to get to know one another, and presenting a positive attitude and invitational instructional style. The instructor can help close the distance of time and space often felt by learners in OPD

courses. It is important for learners to feel connected with other learners and the instructor because [verbatim synchronous text chat], “They do not want to think they are hanging in cyberspace alone!” Mary helps learners make these connections through instructor presence in the discussion boards, personal feedback, quick and timely responses, and with thoughtful suggestions to assist learners.

Making sure that learners are comfortable navigating within a course and with using the LMS is a key component of establishing learner comfort. The instructor should be aware of the learner’s skill with using the LMS because this may be their first online course. There is much to learn when using an LMS, including learning to navigate between course content, following discussion board threads, learning about course policies and procedures, and learning to submit assignments. Each step in learning to use the LMS is important. Learners need to know where to find each component of the course, how to use the buttons and menus to navigate, and how to return to the same location again. The learner also needs to know the instructor’s expectations for learners. Mary suggested that some learners will need organizational tips to help them navigate through the course, while other learners will need help with understanding directions and assignments, and others will need help with time management issues. Some learners may be fearful, panicked, or frustrated. A crucial role of the instructor is to allay the fears and frustrations of learners through the provision of support. This support will help learners progress through the course without experiencing too much frustration. Learners who experience too much frustration are more likely to drop the course.

The instructor’s positive attitude and invitational instructional style can also help build the OPD learning environment. Mary has a positive attitude about teaching and

learning online and feels that she can empower adult learners to reach their goals. Mary described her facilitative instructional style as inviting, embracing, and celebrating learning through "positive strokes and encouragement." Mary related a negative experience that upset her as a learner in an OPD course. She received an email flagged with a red envelope from her OPD instructor noting that she had forgotten one part of the six-part assignment; as a result her assignment was incomplete and late. Like many adult learners, Mary had several serious events occurring in her personal life at the time and the red envelope upset her. Mary would have preferred a different, lighter approach from the instructor, for example, "Gosh, MB, great job on those first five assignments you did! Take a peek at number 6-B which might have slipped by you and just finish that. Then you'll be done, girl." Mary calls the red envelope, "a metaphor for non-invitational learning," and says that non-invitational learning involves aggravating the learner, intimidating the learner, or hurting the learner's feelings. Mary described this incident to the adult learners in one of the OPD course she was facilitating, [verbatim discussion board posting] "I will NEVER send you a RED ENVELOPE noting a late assignment or mistake." Mary feels that it is important for the instructor to approach problems in a positive way and gives instructors this advice: "Don't shut the door on the possibilities of growth by immediately offending your often capable adult learners."

Easing learner anxiety and fears and building trust are other ways to create a supportive environment. One way that this is done is through comments that Mary makes to learners via the discussion board. Mary told one of her learners, "goofs are great" and to another learner Mary said [verbatim discussion board posting], "Ouch. I feel your pain . . . but surely you have colleagues with whom you can collaborate." In addition to

empathetic comments to support learners, Mary also shares some of her own mistakes made prior to having a full understanding of the course content. For example, Mary explained that she made a mistake once when she gave a presentation without fully considering her audience, a topic that is covered in the course.

Building trust is also important. Mary works to build trust among learners by providing feedback to them. Mary uses email to send corrective feedback directly to learners and never posts this information on any discussion board. Mary begins with positive comments and praise to let learners know what they are doing well, and then she offers suggestions to improve work. According to Mary, learners must be able to trust the instructor and other learners in order to feel comfortable expressing themselves. Mary provides written expectations asking each course participant to be respectful of the different opinions expressed by other learners and the instructor and encourages learners to behave appropriately. Building trust in the OPD environment is crucial. Mary states:

> I want them to be able to risk take. I think when you have a bad experience [pause] an instructor makes you feel foolish in a class – doesn't encourage you and invite you to learn. I think you slam the door sometimes and miss opportunities to learn.

Using communication tools effectively can enhance the OPD environment. The instructor sets the tone for communicating with learners. Mary prefers to promote a warm online environment as opposed to "online cold." Mary shapes her communication with learners by using an informal, casual tone. Instead of "accusing" learners of missing an assignment, Mary takes the blame citing the possibility of a technical glitch or an oversight on her part. For example, Mary stated, [verbatim e-mail] "FYI . . . I can't locate your final Excel assignment. It might have been lost in cyberspace." Mary also uses

emoticons to portray feelings and emotions and often shares “light” personal information to help learners get to know her as a person and as an instructor.

Mary makes an effort to support each learner in a positive environment and works to build trust in the OPD learning environment. Mary takes time to get to know each learner personally by considering their experiences, their learning styles, and by working with them to help them achieve the goals that they set for themselves in the course. Mary tries to remember that the participants in her OPD courses are thinking, feeling, adults who should be treated with respect and courtesy.

Instructional Strategies to Facilitate Online Learning

Mary strongly supports the conception that all instructors working with adult learners need a good understanding of adult learning theory and need to put this knowledge into action while facilitating adult learning. Mary indicated that Knowles’ body of work on andragogy has strongly influenced her beliefs about facilitating learning with adults. Mary referenced beliefs about the capabilities, experiences, and interests of adult learners, the importance of providing meaningful, relevant, and useful assignments, being flexible and open to make changes according to the specific needs of learners, and the importance of differentiating instruction for adult learners. Mary considers adult learners as independent, capable, experienced, and competent in multiple areas. These beliefs influence Mary’s approach to facilitating online learning with adults. Within these beliefs about adult learners, Mary seeks to select and use the strategies that will help learners make connections between the content and real life applications.

How Mary selects and sequences instruction will be examined next. Mary believes that instructional strategies need to be selectively chosen and not randomly

added to a course. To select and sequence instruction, Mary begins by thinking about what will be the most meaningful instructional strategies for learners. Instructional strategies are chosen for relevance to the learner, to "hook" or engage the learner, to encourage the learner to make connections between the content and "past knowledge," and to help learners make real world connections. The real world connections between what is known by the learner and what is learned forms a bridge from the content of the course to the context of their job setting. Activities and assignments are often chosen randomly. Mary states,

> I have often heard instructors or instructional designers saying, "Oh, let's just have them do one of these strategies and oooh . . . let's have them do one of these . . . " just to throw in a handful of popular strategies. But the strategies are not necessarily meaningful and they may not connect the knowledge and concepts as effectively as carefully chosen strategies.

In addition to choosing and sequencing instructional activities and assignments, Mary believes that getting to know each learner is an essential part of teaching online. Instructors who facilitate learning with adults need to get to know each learner individually. Mary suggests that using a learning style inventory at the beginning of each OPD course would be a great way to start the process. Mary mentioned one of her "pet peeves" is that K-12 teachers learn to use many instructional strategies, such as using learning style inventories to determine how to differentiate instruction for students; however, the same knowledgeable teachers who teach professional development courses do not use these strategies when working with adult learners. Mary is convinced that using a wide variety of instructional strategies would produce effective results with adult learners because adult learners have diverse experiences and each learner deserves to have a challenging, interesting, and respectful task.

Because each learner is unique and will learn different things from course content, Mary is open to offering different assignments that may be more meaningful for the learner. When Mary discovered that one participant already had a Website, she knew the assignment to create a Webpage was not going to challenge the learner. Mary was flexible about changing this assignment and asking the learner to create a blog instead of a Webpage. Learning to create a blog was something new, interesting, and challenging for the participant. Mary provided an alternative assignment for the learner who had already mastered the original assignment. The new assignment was more challenging and opened the possibility of taking the learner a step beyond their current knowledge. Mary has created other assignments, such as a tiered assignment in which the learner selects one of three assignments that are progressively more difficult. The instructional strategies and alternate assignment provide examples of the value that Mary places on recognizing the specific needs and ways of working with each individual learner. Mary chooses to provide options that would allow each learner the best possible opportunities to grow and prosper.

Summary

Adults learn by making connections with the content, with other learners, and with the instructor. Adult learners should be recognized and respected for the knowledge, experience, and talent that they contribute to the instructional setting. While some learners struggle to learn online, others excel. Mary feels that instructors should facilitate rather than demand learning from adults. Learning in OPD courses requires the participation of the learners and the instructor working together to create connections. Making connections is what learning is all about. The instructor can engage learners through

relevant content, positive feedback, and by establishing a comfortable learning environment.

Mary emphasizes the importance of extending an invitation for learners to learn and providing an invitational learning environment to create a positive foundation for learning to occur. The isolation experienced by some distance learners can be overcome through the instructor's assistance with helping learners acclimate to online learning, through the instructor's positive attitude, and by helping learners make connections within the learning community. Mary strives to make sure that each learner can successfully navigate through the course and can develop an understanding of the content and the course assignments.

Providing positive feedback, celebrating learning, and building trust make the online learning environment feel warm, comfortable, and safe. When a learner feels anxiety or fear, Mary is empathetic and offers suggestions to alleviate fears and discomfort. Mary supports learners with prompt and timely feedback, instructor presence in the course discussions, and through praise and positive comments. Mary's tone is positive and her attitude reflects the idea that each person is "human" and each makes mistakes–including Mary. Each person is an adult and should be treated with respect and courtesy. A solid foundation in adult learning theory and applying adult learning theory help instructors facilitate learning with adults.

Knowledge and competency with adult learning theory will help the instructor understand the importance of recognizing the experience, capability, and interests of adult learners. Instructional strategies must be relevant to the learner, should "hook" or engage the learner, and help the learner make connections between what they know, and

new ideas and ways of applying learning in real world settings. Instructional strategies should be carefully and purposefully chosen for maximum benefit to the learner. Another way to benefit the learner is through knowledge of individual learning styles and through differentiating instruction.

CHAPTER 9

GRACE

"There has got to be more collaboration and I wish there was more online. I just don't think people are used to going online yet."

Grace Anders taught high school social studies classes for 28 years prior to accepting a job as an instructional technology specialist for the Division of Curriculum and Instruction in the King County School District. As an instructional technology specialist, Grace provides training opportunities for adult learners on topics related to integrating technology into the curriculum. She works with the faculty and staff of the high school where she previously worked as a social studies teacher and also with the faculty and staff of one middle and two elementary schools.

Grace first became interested in online learning while she was still a social studies teacher at Northeast High School. Grace began her venture into online teaching and learning when she participated in a national technology grant that provided training in online course development. Grace began learning about online course development by taking an online course associated with the grant project. At the same time she began designing a course on cultural diversity for high school students. While Grace developed the high school course, her mentor, a Massachusetts Institute of Technology professor, communicated and interacted with her and guided her learning process. According to Grace, the result was a better course that incorporated assignments with activities requiring learners to use higher order thinking skills, such as synthesis and evaluation.

One activity in the newly developed course involved giving data to students to analyze and form conclusions. Grace finished creating the course but never taught it because she changed jobs and began working with adult learners in a new job position as an instructional technology specialist.

Grace began using her online course development skills immediately to co-develop King County's first locally developed OPD course. Grace has co-developed two other OPD courses that are currently being taught in the district. In addition to developing and teaching OPD courses, Grace has completed an advanced instructor and developer OPD course that helped her learn about using the new audio tools that are available in the LMS. Although Grace enjoyed the course, she occasionally felt unsure of what the course instructors were looking for in some assignments.

Adult Learning in OPD Courses

Grace Anders's experiences as a teacher, instructional technology specialist, online course developer, OPD instructor, and online learner have influenced her beliefs about adult learning in OPD courses. Grace views learning as a process of building personal meaning based on experiences and interaction. Linking new concepts to existing knowledge is an important part of the learning process. Learning is enhanced through the examination of divergent perspectives. Active participation in learning involves hands-on practice with new skills and occurs through the process of doing something or producing something. What is learned must connect with learners' wants and needs in order for it to be important to them. Learners are more apt to learn if they can put learning to immediate use and learning is connected with the concept of "what's in it for me."

According to Grace, effective instruction is planned with the learners' needs in mind. Learners' ideas must be taken into consideration and learners should have opportunities to make meaningful choices by selecting activities that will be useful for them. Adult learners need to learn about new resources and tools, and have the opportunity to work on several smaller projects, or on one long term project. Adult learners need hands-on practice in order to make learning connections. The instructor cannot just show content to learners and expect them to learn. Instead the learner needs to try out new skills, ideas and concepts, and use them thus making the skills, ideas, and concepts their own. Otherwise the learning will never be used.

Learners need to take course content and revamp it and use it for their own purposes so that they feel that they are getting something useful out of the course. This encompasses the "what's in it for me" and the "how am I going to apply it" principles. In the *Advanced PowerPoint* course that Grace teaches, the expectation is that each learner will create something to use in their job setting (e.g., their classroom). In *Web Tools for Educators*, the expectation is that the learner will investigate different tools and choose to learn about the tools that are most relevant to their needs. Adult learners need time to figure out how they are going to use the content of a course in their job setting and time always seems to be limited.

Learner skills and competencies with both content and technology vary widely. While some learners have technical issues because of limited technical experiences, other learners have problems related to technical issues beyond their control. Some learners work well in an online learning environment, while others may experience problems with online learning. Grace suggests that training learners about the ways to learn online prior

to taking an online course might be helpful. Some learners that enroll in OPD courses do not possess the necessary skills to begin the course. Grace feels that this is partly due to the way that learners enrolling in an OPD course self judge their own capabilities in regard to the prerequisite skills listed in the course description. Grace notices that learners sometimes over-estimate their skill level and recognized the need for a more effective way to prescreen learner skills prior to the first online class. Grace suggests that improving communications through the course catalog and providing a better means of assessing the prerequisite skills needed by the learner for success in the course might also prove helpful.

In addition to required entry skills, learners also differ in their level of self-direction in learning. Some learners need step-by-step direction and a lot of support from the instructor while other learners are more independent. Grace states,

> Some I can see like to have step-by-step, hold their hand, through, you know, give me one, step two, step three, step four and let me do it. Others, you can give them information and they do it on their own, they don't want to be hand-held.

Learners who need more support and nurturing often want immediate feedback while learners who are more independent prefer to wait for feedback after the assignment has been completed and returned to them. One important role of the instructor is to nurture the learners who require a lot of support and move them towards becoming more independent learners. Grace describes the "perfect," and the "typical" adult online learner and the descriptions are summarized in Table 13.

Grace expresses concern about a trend that she has seen where learners do not want to do the work required to complete an OPD course to receive the course credits. Grace thinks that some learners may feel that taking an OPD course might be too much

Table 13

Grace Anders' Beliefs about Adult Online Learners

Regarding	"Perfect Learner"	"Typical Learner"
Attitude toward learning	Has a positive attitude	Thinks OPD course will be easier than face-to-face course
Commitment	Willing to try new ways and ideas	May drop the course because of the amount of work required
Feedback	Asks the right questions	May not be as comfortable with communicating with the instructor; hesitant about sharing
Motivation	Self-motivated in learning, puts time and effort into learning	Motivated by the need for PLU credits
Participation	Self-directed in learning, collaborative	May not be comfortable with writing their thoughts on certain subjects; May not be willing to work collaboratively
Reading skills	Good reader	May not read carefully
Technical skills	Tech-savvy enough to troubleshoot problems	May lack technical skills and /or course prerequisites; Consider themselves tech savvy

work. Grace points out that a learner enrolled in a college credit course will most likely be expected to complete more work than that is typically required in an OPD course for similar credit.

Creating Learning Environments in OPD

As an instructor, Grace works to create a welcoming environment that nurtures and supports learners as they develop skills and independence in learning. Online courses need a comfort zone. To create this comfort zone, Grace begins by welcoming learners, explaining course procedures, and establishing expectations. Learners are provided with the topics in the course and with a list of necessary items, such as software and hardware.

Grace opens the conversation with learners through the discussions board and asks learners to share their opinions and ideas. She encourages learners to consider diverse perspectives. Grace makes suggestions to learners rather than making mandates and asks for input about what the learners want to learn about next. Grace also encourages learners.

Grace believes that part of supporting and nurturing learners involves praising learners for excellent work. For example, comments to learners include [verbatim discussion board posting] "great idea using PowerPoint" and "great summary of the articles." Another way Grace provides support is that she takes a learner's presentation and makes a modification to one small part in order to demonstrate how to use certain techniques (typically an advanced and complex task). Then she returns the presentation to the learner with the expectation that the learner will complete and re-submit the assignment. Grace describes this process:

> As they turn in pieces, and as the piece is turned in you're actually encouraging them or nurture them through making it a little bit better or changing it in a certain way, or revamping it, or giving them more ideas, so that then with the final product it looks 100% better than just waiting until the end and seeing it.

This hands-on way of providing analytical feedback to learners has been a successful way to help learners understand some of the complex features of MS PowerPoint, such as creating animated charts and tables. In turn, this strategy seems to help learners feel more comfortable in the learning environment and encourages the learner to get to know the instructor better.

Instructor availability is also an important component of establishing a positive learning environment. Grace believes that the instructor should be available to learners during the course to assist learners and after the course to follow up on what learning has

taken place and to find out how learning has been implemented. Grace feels that there is a lack of follow through from the instructor to the learner after the course concludes in both OPD courses and also in face-to-face professional development courses. Grace states, "we don't follow up." Grace made this statement three different times, thus emphasizing the strength of her belief in the importance of instructor follow-up. Follow-up is crucial to classroom implementation and getting teachers to use new resources, tools and strategies. Grace contacts learners after the *Advanced PowerPoint* class ends so that she can find out how their presentations went and to find out how learners applied their new skills in their job setting. Grace suggests that including the concept of instructor follow-up in a training course for OPD instructors might help disseminate this idea among other OPD instructors and could serve to strengthen the connection between learners, professional development, and the process of implementing what is learned in OPD courses.

Increasing collaboration among learners and the instructors is another way to create an interactive and engaging learning environment. Grace believes that learners build personal meaning through interacting with others. At the present time Grace feels that learners do not collaborate enough. Some learners need to shift from an attitude of "It's mine. I'm not going to share." One way to increase collaboration among learners is by training learners in online discussion techniques. Grace is currently using text based discussions yet she feels that adding audio tools as an option for discussions would open up more sharing and collaboration among learners and would also help the instructor assess what learning is taking place. Grace states [verbatim synchronous text chat], "Sharing and collaborating in the Discussion Board is necessary to see if they understand what they have done with each session."

Instructional Strategies to Facilitate Online Learning

Grace views learning as a process of constructing personal meaning through experience and interaction and by considering divergent viewpoints. Learning is active and social, involves hands-on practice, and must connect with the learners' wants and immediate needs. Learning must be useful and applicable to the learner in their job setting. These views are consistent with constructivist learning theory.

Advanced PowerPoint is a skill based course that Grace co-developed and facilitates, yet Grace believes that learners should go beyond making effective presentation to embrace new techniques for prompting higher order thinking skills within presentations. Grace maintains that instruction needs to be taken up a level through the use of presentations as opposed to using presentations to teach discrete skills, such as how to add a movie or how to add an animated chart to a presentation. Grace states, "if we want them to have higher order thinking skills and use them we've got to model it." Grace wants participants taking the OPD course to learn techniques to engage their own students with using higher order thinking skills. One instructional strategy that Grace uses to communicate this idea to learners is informative feedback. For example, if the learner has added a movie to their presentation, Grace may suggest adding questions that will help the viewer synthesize and evaluate the content of the presentation. Through informative feedback to learners, Grace models the use of higher order thinking skills and encourages learners to include higher order thinking skills in their presentations for students and also in creating assignments and requirements for student created presentations.

In addition to modeling, Grace uses analytical feedback with learners. Learners in *Advanced PowerPoint* read information, go through steps in a tutorial, and then practice

using a new skill on their own. Tutorials are offered in different formats, such as text based with step-by-step directions and auditory and visual tutorials from different Web-sites. After completing a tutorial, the next step is for the learner to use the new skill in an assignment that is sent to the instructor. When a learner has difficulty with the new skill, Grace takes their presentation, makes a small change to it, and returns to the learner for additional work. Grace often assists learners who are having a particular problem with a PowerPoint technique, such as animating a graph. Grace corrects part of the animation and returns it to the learner and expects the learner to finish the remainder of the graph.

This is an example of analytical feedback. This instructional strategy enables the learner to view an example or technique used to solve an actual problem that they have experienced. This process allows the learner to visualize new techniques for improving their presentation. Grace also provides information that helps learners improve their presentations (informative feedback). Grace feels that using analytical and informative feedback opens a pathway of sharing from learner to instructor back to the learner again and helps build connections with learning. Learners need time to develop a project that will be useful for them and the time frame is structured into the assignments in the *Advanced PowerPoint* course. In the course, each learner constructs part of their final project through a weekly assignment. Frequent feedback from the instructor helps the learner understand and improve the project. Providing multiple opportunities for revising work is essential to increasing and extending the learning process.

Using strategies to increase collaboration will also help facilitate adult learning online. Most of the collaboration that occurs in *Advanced PowerPoint* happens through the discussion boards. Grace responds to learners as they contribute to a discussion and

asks additional questions to keep the discussion moving; however, Grace has experienced difficulties with getting learners to return to discussions and read the additional questions she has posted for them. Grace feels that some learners do not know how to express themselves in a written form and this may hinder learners' contributions to online discussions. Grace is not comfortable with mandating additional learner participation in discussions and reflected on the idea of experimenting with new tools and techniques to encourage learners to contribute more frequently and thoughtfully to discussions. Grace wants to experiment with using voice discussions so that learners can record voice comments rather than contributing written, text comments. Additionally, Grace wants to incorporate synchronous meetings with learners and use audio tools to communicate thoughts and ideas. Grace hopes that the ability to speak and record ideas rather than having to write everything will encourage participation, leading to more collaboration. Grace has also experienced difficulties within the LMS that have prevented other types of collaboration that she envisioned with the course.

Grace wanted learners to share their presentations within the *Advanced PowerPoint* course so that their colleagues might gain new ideas and share feedback with their peers. Technical difficulties have prevented learners from sharing their PowerPoint files within the LMS. Grace also wanted to use smaller groups within the LMS to work together collaboratively. Grace states [verbatim synchronous text chat], "In Adv. PowerPoint we had divided up into groups called (Power) and (Point) to show and compare PowerPoints. However, the links and files for the Adv.PowerPoint would not load here—so had to be changed." This was disappointing to Grace who views this difficulty within the LMS as a limiter of the collaboration that has the potential to deepen

learning. Grace has submitted suggestions for improving this aspect of the LMS in order to facilitate collaboration among learners and she keeps trying to find different strategies to encourage collaboration within the OPD courses she facilitates.

Summary

Learning is a process of building personal meaning through experience and interaction and involves linking new ideas to existing knowledge. Learning is an active process that involves hands-on practice. The learner benefits when what they learn is linked to their immediate needs and when learning can be applied in authentic situations. Instruction should be planned with the learner in mind and learners should be able to make choices to select assignments that will be personally meaningful. Learners need time to adapt the course content to their own needs. Learners have varied skills with course content and with technology that may serve to help or hinder them in an OPD setting. Improving the course description in the OPD catalog would help learners better understand the prerequisite skills needed for success in the course. Online learning requires work, time, and effort. Learners may be surprised at the amount of work required to complete an OPD course.

The online learning environment should be a welcoming place where learners are supported, encouraged, and feel comfortable sharing their ideas. The instructor nurtures learners who need assistance while encouraging them to become more independent learners. One way the instructor nurtures the learner is with praise about well done work. Providing feedback to guide learners can help learners understand difficult tasks. The instructor should be available to learners during the course and also be willing to follow-up with learners after the course is completed. Following-up with learners could

strengthen connections between what learners learn and how learners implement new concepts into their job setting. Learners need more opportunities to collaborate and share ideas. Most interaction and collaboration in OPD courses occurs through discussions. Learners need to be trained to participate in discussions. Using audio tools and synchronous meetings may have the potential to increase collaboration among adult learners in OPD courses.

Grace stresses that modeling the use of higher order thinking skills within a PowerPoint presentation is one way to show learners how to incorporate higher order thinking skills into their own presentation and in student created presentations. Tutorials are provided in a variety of formats from text-based to auditory and visual. Grace uses analytical and informative feedback to help learners understand difficult techniques and encourages learners to continue to revise and improve their work. This process extends learning and provides learners with time to improve their work. While some interaction and collaboration occurs through online text discussions, Grace has difficulty getting learners to return to previous discussions to respond to the additional questions she posts. Grace is interested in experimenting with new tools to encourage participation, interaction, and collaboration. These tools are audio or voice discussions, and synchronous meetings. Establishing collaborative groups that share and compare Advanced PowerPoint files has been problematic because of limitations within the LMS.

CHAPTER 10

CROSS CASE ANALYSIS

In the previous five chapters, I introduced and examined the beliefs of five instructors who taught an OPD course for adult learners in the King County School District during summer 2006. The purpose of this chapter is to compare each instructor's beliefs about adult learning in OPD courses and to examine the themes that emerged. Beliefs are defined as implicit assumptions about teaching, learning, learners, learning environment, and instructional content (Kagan, 1992).

Data for this study included interviews, discussion postings, and online instructor journals, and was collected from June 2006 through December 2006. Data were analyzed using the constant comparative method of Glaser and Strauss (1967). This study was guided by three questions:

1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?
2. What are the instructor's beliefs about creating an online learning environment for adult learners?
3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Data analysis began immediately after each interview was transcribed. Codes emerged as data collection and analysis continued. Some codes were collapsed into others while new codes continued to emerge. During this time, I engaged in memo

writing to explore further the meaning of the codes while also developing connections and relationships between the codes. Charmaz (2006) describes memo writing as a means to crystallize ideas and gain insight. Memos were shared with a peer reviewer and this process helped me further clarify meaning. As the final coding scheme evolved, themes began to emerge from the data. Each theme was later matched with the research question for best fit and is summarized in Table 14.

Table 14

Themes from Instructors Beliefs

Research Question	Themes
1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?	Adult learning in OPD courses is an active process of making connections and applying knowledge and skills. (making connections) Learning for adults in OPD courses must be useful, meaningful, relevant, practical, adaptable, and applicable to the work setting. (meaningful learning) Learning for adults in an OPD course requires more effort and commitment than learning in face-to-face professional development settings. (more effort required for learners)
2. What are the instructor's beliefs about creating an online learning environment for adult learners?	Adult learners in OPD courses need a comfort zone where they can feel "safe" communicating and interacting with learners and the instructor. (need for a comfort zone) Adult learners need varying amounts of encouragement, support, guidance and nurturing within a positive OLE that supports and sustains them. (need for support)
3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?	Instructors believe that collaboration is an effective strategy for facilitating learning with adults in OPD courses, yet existing barriers limit collaboration. (collaboration and barriers that limit implementation) The OPD instructor is a flexible facilitator of learning who uses different types of feedback to confirm, correct, and inform learning with adults. (instructor as flexible facilitator)

The first section of this chapter will examine Question 1 of this study and the three themes that emerged from the data in regard to the participants' beliefs about the ways that adults learn in OPD courses. The second section of this chapter will examine Question 2 and the two themes that emerged from the data in regard to participants' beliefs about creating online learning environments for adult learners. The third section of the chapter will address the Question 3 and the two themes that emerged from the data in regard to the participants' beliefs about instructional strategies for facilitating adult learning online.

Adult Learning in OPD Courses

All five participants indicate that adult learning is an active process involving interaction, participation, and effort. However, each participant in this study holds a slightly different view about learning. Heather, Kim, and Susan state that learning is stored, and Heather and Susan indicate that learning involves a change of meaning. These ideas are consistent with a cognitivist view of learning. Heather reaches beyond her cognitivist view of learning as a change of meaning stored in memory to include the idea that learning also involves creating personal meaning through interaction (a view consistent with constructivism). To Heather, learning is enhanced as the individual learner "owns" their learning. This places Heather on a continuum between cognitivism and constructivism. Kim and Mary maintain that learning is personal and is constructed from experience, views that are consistent with constructivism. Grace views learning as a process of building personal meaning through interaction and the consideration of diverse perspectives. Grace asserts that learning is a hands-on process that involves creating something or doing something. Grace's views are consistent with a constructionist view

of learning. Constructionism is a learning theory based on constructivism, and it places emphasis on learning by doing something or by creating a product (Kafai & Resnick, 1996). Figure 1 provides a view of each participant's position based on Jonassen's (1991a) continuum of learning from objectivism to constructivism. The position of each participant on the continuum was determined by the participant's stated views about learning, creating learning environments, and instructional strategies used to facilitate learning with adults.

Ertmer and Newby (1993) assert that there is a need to form a bridge between beliefs about human learning and theories of learning in order to understand them better and to solve instructional learning problems. To form this bridge, instructional decision makers must have a full understanding of all learning theories in order to support instruction. Snelbecker (1987) recommends that researchers and theorists focus on one learning theory while noting that practitioners and designers can benefit from using instructional strategies based on multiple learning theories, a concept Snelbecker terms *systematic eclecticism*. Zinn (2004) notes the importance of clarifying a personal philosophy of adult learning and asserts that an adult educator's beliefs influence the selection of instructional content, ways of interacting with learners, and processes for evaluating learning outcomes.

Susan		Heather Kim & Mary	Grace
Behaviorism Objectivism	Cognitivism	Constructivism	Constructionism

Figure 1. Behaviorism to Constructionism Continuum

Making Connections

All participants in the present study feel that learning is a process of making connections. Mary states, "It's making connections with your students. It's helping the students make a connection with the content and then relating the content in a connection to the outside world where it is relevant." Heather extends the concept of making connections to include peer involvement. To Grace, making connections involves following through with learners after the course ends and asking learners how learning is being applied in authentic contexts. Kim maintains that learning is an integral part of a fun, engaging life. Learning occurs in a variety of ways including collaboration (Grace and Mary), hands-on problem solving (Grace and Heather), and interaction (all). Learning involves new concepts and variety (Kim), connecting learning to prior knowledge (Heather, Mary, and Susan), inviting the learner (Mary), personal discovery (Susan), practice with new skills (Susan and Grace), doing, creating, or revising (Grace), and taking theory and making it practical (Heather). One theme that emerged from the data is that adult learning in OPD courses is an active process of making connections and applying knowledge and skills.

Meaningful Learning

In addition to making connections, it is also important for the instructor to get to know learners. Kim states that learning involves hooking into learners' experiences, interests, and background knowledge. Mary asserts that adult learners are knowledgeable and bring a wealth of experiences from formal and informal learning settings. While connecting to prior knowledge may be a starting place for learning according to Heather,

Grace observes that learners need time to make connections between the content of the course and discovering ways to implement and apply their learning. One theme that emerged from the data is that learning for adults in OPD courses must be useful, meaningful, relevant, practical, adaptable, and applicable to the work setting. Susan equated relevancy with making connections to a job or work related need. Kim supports this conception of providing learning opportunities for adults to create authentic, job-embedded assignments. While Grace focuses on linking content and learning opportunities with learners' immediate learning wants and needs, she also emphasizes that learners should create or adapt something in order to make learning personally meaningful. Heather maintains that the content should be interesting and manageable for learners.

More effort required for learners

Adult learners may be taking a class online for the first time and may need to get into "student mode" according to Heather. Sometimes learners have difficulty because online learning is new, different, or confusing to them. Mary empathizes with new online learners and remembers the confusion she experienced the fist time she took an online course. Grace notes that learners need to know the instructor's expectations. One of Grace's expectations for learners is that online learning is going to require more of the learner's time and not less. Grace would like to find a way to communicate with potential OPD learners to help them understand differences between face-to-face and OPD courses. Grace suggests amending the course description in the course catalog to include information about online learning, for example, time requirements, and work expectations. This may serve to help potential learners understand the work load and time

commitment involved in taking an OPD course. Grace, Kim, and Mary indicate that some learners struggle to learn online while other learners excel in online learning environments. Overall, the instructors in this study stress that learning for adults in OPD courses requires more effort and commitment than learning in face-to-face professional development courses.

Learners differ in regard to their technology skills. Grace describes the technology skills of learners as ranging from poor, for example, not knowing how to click a mouse to excellent. Grace asserts that learners with less developed technology skills will need more time to learn how to use the LMS, for example learning how to download and upload files within the LMS. Learners with inadequate technology skills may not be successful with an OPD course. Kim states,

> Unfortunately I think people sign up for online classes thinking they are going to be easier, faster, they don't have to travel, and they get in there and find out–especially if their technology skills are low–that it probably wasn't such a good idea after all. And then they usually drop.

Mary mentions one learner who had technical difficulties from the beginning of the *TechConnect* course. After several email discussions with this learner, Mary suggested that a face-to-face environment might provide a better fit with his learning style. The learner thanked her and followed her suggestion. Kim chose a blended course structure for the second offering of *Web Tools for Educators* and required learners to attend face-to-face classes and complete sessions online. The face-to-face sessions enabled the instructor to provide more hands-on support and assistance to learners. This decision was based on concerns about the varied technology proficiency of learners and Kim's belief that blended learning is the best. Kim states,

> When I mentioned blended to the parapros [in the first offering of the course] they liked that. They thought that they would have been much

> more successful if this course had been blended and research tells us that. Research tells us that blended is the best.

Instructors want to make sure learners have the necessary prerequisite skills to be successful with online learning. Grace and Susan expressed similar concerns about learners not having the prerequisite skills necessary for success in their respective courses. Learners evaluate their own skills against prerequisite skills listed as required for entry to specific OPD courses. Grace and Susan believe learners often lack the skills to begin the *Advanced PowerPoint* and *MS Word* courses. Grace argues that the course catalog description is not sufficient to describe the skills that instructors expect potential learners to have. Susan plans on communicating her expectations to learners before the course begins. Susan states, "I will be sure to emphasize in advance that we expect participants to have intermediate skills in using MS Word as well as what the specific assignments are for each week."

Learners also have different attitudes about learning and are motivated in different ways. Instructors believe that adult learners have a variety of attitudes toward learning in OPD courses. When study participants described a "perfect" adult online learner and a "typical" adult online learner, two categories appeared in all descriptions: attitude toward learning and motivation. At times the two categories seemed to intertwine. For example, the attitude of a learner may be determined by the learner's motivation. Table 15 provides a comparison of instructor's beliefs about the attitudes of adult learners.

Voicing beliefs about the attitudes and motivations of the "perfect" learner and the "typical" learner may help the instructors clarify their view of the adult learner who will excel at learning in OPD courses. Table 16 provides a comparison of instructor beliefs about the motivation of adult learners.

Table 15

Instructor's Beliefs about Learner Attitudes

Instructor	"Perfect Learner"	"Typical Learner"
Grace	Has a positive attitude	Thinks an OPD course will be easier than a face-to-face course
Heather	Wants to learn and values the insights of others; truly interested in the course; flexible	Takes the course because it looks interesting; course looks like it can be completed without a lot of effort
Kim	Thirsty to learn, conscientious, best foot forward, not afraid to fail, willing to explore and search for answers to their questions	Sort of interested in learning, does just enough to get by, won't venture outside the box, want quick and easy answers
Mary	Disciplined	Someone looking for easy course and/or doesn't want to sit in class; someone happy with online and is good at it; someone who has no idea what they are doing
Susan	Open to learning new ideas	May have some problems adapting the content to the job setting

Table 16

Instructor's Beliefs about Learner Motivation

Instructor	"Perfect Learner"	"Typical Learner"
Grace	Self-motivated, puts time and effort into learning	Motivated by the need for PLU credits
Heather	True interest in course; not motivated by the need for PLU credits	Some interest in the course; motivated by the need for PLU credits
Kim	Self-motivated, OPD is something they want to do	Somewhat motivated, OPD is something they have to do to maintain certification
Mary	Self-motivated, chooses to achieve or overachieve	Someone who needs PLU credits, does the basics to get by
Susan	Puts time, thought, and effort into their work; goes beyond the basic requirements for assignments.	Does what is required without embellishment

Instructors would like adult learners to be self-motivated, have a true interest in the course content, and put time, thought, and effort into completing course assignments. Predominant themes regarding the “typical” adult learner included the perception that adult learners are generally more motivated by an interest in obtaining PLU credits than by an interest in the course content, and “typical” adult learners will seek to meet the minimum requirements of the course rather than making an effort to go beyond what Susan terms the “bare minimum.”

Learners display different levels of self-direction in regard to their own learning. Adult online learners vary greatly in their ability to direct their own learning. While some learners are self-directed and work independently with minimum support from the instructor, other learners need a lot of support and “hand-holding” according to Kim and Grace. Susan maintains that “online learners need to have a certain independence and willingness to help themselves." All instructors in the present study make a conscious effort to support and nurture learners, particularly learners who need more “hand-holding” and assistance. Instructors determine the amount of nurturing each learner needs by examining discussion postings, email communications, and submitted assignments. At times it is easy for the instructor to detect that a learner needs more help or support, while at other times it is more difficult. Susan noted that in a face-to-face classroom it is easier for the instructor to assist a learner who is having difficulty. In an online setting the instructor may not know that a learner is having a problem unless the learner contacts the instructor to discuss the problem. Therefore establishing good communication in OPD courses is an key factor in determining the level of instructor nurturing and support needed.

Providing the right amount of support is also important. Kim believes that if an instructor provides too much support the learner may not take ownership of their own learning. Grace assists learners who need extra support and helps them develop the independence to assume the responsibility for their own learning. Grace notes that it is difficult to let go of the support role and to expect learners to become more independent (less reliant on the instructor). Although Grace thinks it is important to find a balance between providing support for the learner, and expecting the learner to begin assuming more responsibility for their own learning, doing this is difficult for the instructor.

Adult online learners need to know how to manage their time effectively. Heather and Kim indicate that some adult learners have problems with time management. Heather feels certain that learners know the due dates for course assignments; however, while some learners finish early and some learners finish exactly on time, other learners are consistently late when submitting assignments. Heather attributes this pattern to human nature and compares this adult behavior with the way "kids" turn in assignments. Kim reminds learners to set aside time to complete assignments. Susan notes that adult learners can have problems with "extenuating circumstances" that can result in late work; and when learners get behind in their work they may drop the course. All instructors expressed concern about learners who dropped their course.

Adult learners often enroll in a course and then drop the course. Kim states, "I don't know what the answer is . . . but we have got to stop the huge dropout rate in online learning." Mary contends that learners who are bored, frustrated, or have time problems often drop OPD courses. Heather associates the dropout issue with a lack of commitment from the learner. Grace attributes the drop out rate in OPD courses to a lack of

understanding by the learner that OPD courses involve more work than their counterpart face-to-face courses. Kim feels that it is important to keep supporting learners and helping learners experience success with OPD, regardless of those who may drop the course. A theme that emerged from the data is that learning for adults in OPD courses requires more effort and commitment for learners than learning in face-to-face professional development settings.

Creating Learning Environments in OPD

The online learning environment is influenced by the instructor's beliefs about the ways that adults learn online and by their beliefs about the role of the instructor in an OPD course. Each instructor's beliefs about learning were analyzed to pinpoint their location on continuum of learning from behaviorism to constructionism. Jonassen (1991a) developed a scale to illustrate a continuum from objectivism to contructivism. Zinn (2004) suggests that there is a positive relationship between an individual's beliefs and their actions. Clarifying beliefs about adult learning can help the instructor make informed decisions about effective methods for teaching adults.

The instructors involved in this study assert that it is important to support, encourage, and nurture learners within a positive OLE. The five participants in this study emphasize that learning is an active process involving interaction, participation, and effort. Instructors indicate that they want to get to know the learner as a whole person (learner's background knowledge, experiences, interests). By understanding the learner, the instructor can better help the learner make relevant and meaningful connections while they engage in learning within an OLE. The instructor's beliefs about creating OLEs include the challenges learners confront and strategies for building, supporting, and

sustaining environments. The first challenge is to build a positive and comfortable OLE. The second challenge is to support learners in a safe OLE. The third and final challenge is to sustain the OLE.

Need for a Comfort Zone

Establishing a comfort zone for adult online learners is important to Heather. Part of creating a comfort zone and a positive OLE is to help learners overcome the isolation that may result from not seeing or knowing anyone in the OLE according to Mary. Kim is concerned that isolation is becoming a 21st century skill and wants to make sure that each learner in her OPD course understands the importance of participating, interacting, and engaging with other learners and the instructor. Kim maintains that this will help the learner overcome isolation. Heather agrees that learning involves interaction and engagement with the course content. As learners take ownership, they become part of the course through interaction and participation. Mary voices a concern that OPD instructors remember to recognize each learner as a unique human being with a multitude of different things going on in their lives. Participants in this study advocate that the instructor must work diligently to alleviate isolation and help learners make connections within the OLE.

One way to reduce isolation is through establishing what Kim and Mary call the "human touch." Like learning, the human touch involves making connections with people. Kim imagines how she would want to be treated as a learner in an OPD course and tries to treat her learners in that manner. Susan follows the same approach. Susan states, "I treat people as I would like to be treated—with kindness, respect and a this-isn't-brain-surgery attitude." Mary experiences the power of the human touch through

collegial nurturing, support, and encouragement from OPD instructors Grace and Kim. Mary states that it was the human touch that inspired her to become an OPD instructor and course developer. Heather points out that the instructor can build a positive OLE and "personal touch" by sending and posting encouraging remarks to learners and by calling attention to good work being done by learners in the course. Participants in this study provide the human or personal touch through positive communications such as welcoming emails before the course begins, and through ice breaker activities integrated into the introductory discussions in each OPD course.

Need for Support

Instructors need to make their expectations known to learners and to support learners as they learn about the LMS and become acclimated to learning online. Mary uses a soft approach with learners as well as an invitational style. Using the soft approach, an instructor focuses first on the positive things the learner has done and then the instructor provides suggestions for corrections and improvements. Mary holds the view that the soft approach establishes a warm OLE as opposed to a cold OLE. Kim provides a "light" atmosphere where learners feel comfortable asking questions. Susan strongly agrees that learners must feel comfortable asking questions. Susan notes that learners often apologize for asking questions and she strives to let them know that asking questions is a natural part of learning online just like it is in a face-to-face setting. Other ways to make learners comfortable involve engaging their emotions, helping learners feel part of the class, and by affirming what they are doing. These are important components of the invitational OLE that Mary believes is effective for adult learners.

Praise and encouragement also help establish the OLE. Susan believes that the use of praise, positive feedback, and kindly responses to adult learners help establish a positive OLE. Heather states, “We all like to be praised and encouraged. Sometimes I think educators need it a lot, because publicly we are often battered.” Mary also believes that adults need to be praised and encouraged. Mary states, “Some need guidance and encouragement, all need praise and recognition. No one needs admonishment.” One technique to encourage learners is to indicate learner passage through the course with milestones. For example, at the beginning of the course Kim states [verbatim course announcement], “Great . . . you are well on your way. :) We are here to assist you as you learn and earn PLUs. Keep in touch.” Heather and Mary also note milestones as learners make progress toward completing course sessions.

Additionally, the instructor can connect with and encourage learners through empathetic comments and by sharing personal experiences. Several OPD instructors use empathetic comments to encourage learners. Kim states [verbatim course announcement], “Thanks for your patience this week . . . the first week in online learning is always the toughest.” Mary also empathizes with learners [verbatim discussion board posting], “Ouch. I feel your pain . . . but surely you have colleagues with whom you can collaborate.” When learners encounter difficulty with the course work load, empathetic comments can help them persevere. Heather states [verbatim discussion board posting], “This is a 5 PLU course. Hang in there. Once you get past Session 4, there is not as much reading, and you will see how the sessions build upon one another.” An instructor may also share a personal experience to encourage and support learners. Mary states [verbatim discussion board posting],

> I think taking errors more personally might be more "situational" . . . for instance, I love to learn and I stumble and get right back up. But I do get a little "steamed" when my areas of expertise are not recognized. . . . I think the rule of thumb is "know thy audience."

OPD instructors also use feedback to encourage learners. This technique will be discussed fully in the third section of this chapter on instructional strategies to facilitate adult learning.

Effective and positive communications can also help establish and support an OLE. Effective online communication is more than just having a well written message. The tone or style of the message (e.g., how the message is worded and perceived by the learner) is also important. Kim states that it is easy to “slam” or unintentionally criticize someone in a short email. Kim makes an effort to reassure learners and to treat them as “the professionals that they are” while striving to keep the tone and atmosphere of the OLE light and social. Susan maintains the tone of the message is as important as the message itself. Mary approaches all learners with an “invitational style” and communicates with all learners in a positive manner. The instructor should communicate carefully and think about the message that they want to convey to learners.

The use of emoticons can help the instructor and the learners communicate the feelings behind their words. As communication in the course is text based, Mary uses emoticons (text symbols) to display the emotions she feels. Mary provides recommendations about course communications in the gifted course module she has written for a blended course she teaches. Learners are encouraged to ask questions and are advised to avoid using sarcasm and subtleties. Learners are asked to consider using emoticons to help readers understand the emotion behind the textual communication. Mary advises learners that using all capital letters is the equivalent of “yelling” and suggests placing

asterisks around a word or phrase for emphasis. Mary does not always follow this advice herself as she sometimes uses all capital letters to bring emphasis to specific words rather than using asterisks that the communication rule recommends. Mary also uses emoticons to express the feelings behind her words. Kim communicates in the same fashion using selectively capitalized words for emphasis, and she also uses emoticons. It is my belief that Mary has adopted Kim's communication style because she perceives Kim as a role model of a caring, nurturing, and positive OPD instructor. Heather, Grace, and Susan use emoticons infrequently or not at all.

Valuing the contributions of learners is also important. Heather values the contributions of all learners and lets learners know that it is okay to make mistakes. Heather indicates that mistakes are a tool for improving learning. Learners need to be valued and accepted. Heather states [verbatim synchronous text chat],

> [The instructor within the OLE should] Provide a sense of "we're in this together" so students feel they can make mistakes, and always be accepted. Let students know it is a learning situation, and we are sharing what we learn, not looking to see who is the best.

Mary also feels that mistakes are a positive thing for learning. For example, she tells a learner "goofs are great," realizing that some adults fear making mistakes and making "fools" of themselves. Mary reassures learners and eases their fears by telling them she would never call attention to mistakes that they might make. She also shares some of the mistakes that she has made prior to understanding the content of the course. Mary places beliefs into action as she treats adult learners with respect and courtesy and honors them as capable learners.

In addition to easing learner fears and honoring adult learners, instructors use additional techniques to promote a safe OLE. The OLE should be a safe, professional

place for learners to focus on improving instructional practice according to Heather. Making sure that learners are not "too frustrated" with an assignment is something that Susan takes seriously. Rather than blaming learners, Susan feels that the assignment might be at fault when learners have problems and spend too much time trying to complete it. Noting that the problem is with the course rather than with the learner, Susan revises or rewrites the assignment for better clarity. When Mary notices that a learner has not submitted an assignment or is late on submitting an assignment, she asks the learner if the assignment may have gotten "lost in cyberspace" or if she may have missed seeing it. So in this sense Mary takes the potential "blame" rather than blaming the learner and risking the possibility of offending or upsetting them.

In addition to making the OLE a safe place for learners, it is also important for the instructor to get to know learners. Instructors believe that it is important to get to know the learners in their OPD course. All instructors use the first discussion assignment to help learners get to know one another. Kim keeps notes about each learner to remember who they are, what interests them, and what they want to learn and uses the notes to gear the course to meet the needs of each learner. Through the process of getting to know the learners, Kim develops an awareness of the learner who needs a little "nudge." Heather expressed the same idea [verbatim synchronous text chat]: "I need to know who to push harder, who is more 'fragile' in that area, who can do better, who has maximized what they will achieve." Mary maintains that it is beneficial to the instructor to know what learning styles work best for each learner and for the learner to be aware of their own, best style of learning. Self-knowledge of learning styles also helps the learner select the best learning strategies. Like Kim, Mary also wants to know each learner's goals and

expectations for the course. Even though an instructor may personally know a learner from a face-to-face setting, the instructor may "learn" more about the learner as they work together online. Susan states [verbatim discussion board posting]:

> Hi, [student's name]! I am glad you are in the class. I was interested to read that you have been to China and have hiked 800 miles – I did not know these things about you! It's amazing how you can work with someone and not know such things.

Participants in the present study agree that the learner needs to get to know and feel comfortable with their instructor. Grace indicates that this comfort level may take time to develop.

In addition to getting to know the learner, it is also important to consider the instructor's beliefs about their role in an OPD course. Susan views herself as a flexible facilitator and co-learner in the OLE. She states that it is her job to understand the dynamics of online instruction and adult learning. She also notes that it is important for the instructor to model the passion and love of learning. Susan asserts that the instructor should be available to help learners and answer questions. Heather maintains that it is her job to challenge and motivate learners to keep them interacting with one another and to establish a positive OLE by being a personable instructor. Mary asserts that the role of an OPD instructor should be as a learning facilitator with a positive attitude and invitational approach to learning. Like Susan, Mary also believes that adult learning theory should guide teaching and learning experiences in the OLE. Mary focuses on getting to know each learner as well as their learning styles and needs. Kim and Grace also envision themselves as facilitators of learning. Kim holds high expectations for learners and is attentive to what learners need and want. Kim indicates that instructors should bolster the

learner's self-assurance and make sure that each learner has a successful experience in the OLE.

Each instructor has a unique perspective on the ways that adults learn online and the challenges learners face when working in an OLE. Learners within an OLE may feel isolated or "distanced" from the instructor and other learners. Through establishing the human or personal touch, instructors can help learners overcome this obstacle. A theme that emerged from the data is that adult learners in OPD courses need a comfort zone where they can feel "safe" communicating and interacting with learners and the instructor. The instructors build, sustain, and support the comfort zone for adult learners through praise and encouragement, empathetic comments, and through positive communications.

Another theme that emerged from the data is that adult learners need varying amounts of encouragement, support, guidance, and nurturing within a positive OLE that supports and sustains them. When communicating with learner the tone of the message may be as important as the message itself. Instructors establish a safe environment where learners can feel comfortable and supported. Learners are reassured that making mistakes is a natural part of learning. Instructors feel that it is important to get to know each learner so that learning can be shaped to meet their needs. As facilitators of learning, OPD instructors want each adult learner to have a successful learning experience. This successful experience will look different for each adult learner because each learner has different background knowledge, experiences, learning styles, and goals for their learning experiences. The next section will examine the instructor's beliefs about instructional strategies used to facilitate learning with adults.

Instructional Strategies to Facilitate Online Learning

An instructor's beliefs about instructional strategies for facilitating adult learning encompass many concepts, such as the ways that adults learn online, how learning occurs, and the purpose of learning. Beliefs influence the ways instructors shape instruction, including the meaning and purpose of course assignments and the role of the instructor in the learning process. Beliefs influence the perception of instructors about the ways learners interact with each other, with the instructor, and with the course content. Beliefs also influence the organization and sequencing of instruction. The confluence of beliefs intersects with the instructor's knowledge of the individual learner and results in an approach to online instruction. This section begins with a summary (Table 17) of the beliefs of the five instructors in the present study about how adult learning occurs in OPD courses.

From the behaviorist perspective, learning is more of a passive process and involves increasing the likelihood of correct responses through practice and by reinforcing correct responses. From the cognitivist perspective, learning involves a change of meaning stored in memory. Susan's beliefs situate her between behaviorism and cognitivism. Susan provides a variety of tutorials to help adults learn the course content. The tutorials are largely text based yet embedded cognitive strategies help learners navigate and learn course content. For example, information in the tutorials is presented in chunks, and the learner's attention is directed by the use of color, fonts, and bold text. Learners have opportunities to practice new skills and use them in sequential sessions. The tutorials suggest that learners try out their skills in the weekly assignments.

Table 17

Instructor's Beliefs about Learning

Instructor	Beliefs	Learning Theory Continuum
Susan	Learning is a change of meaning stored in memory and is an active process involving making connections. Learning occurs through completing authentic tasks in meaningful contexts. Learners need to practice new skills to reinforce learning and gain fluency.	Between Behaviorist and Cognitivist
Heather	Learning is stored in memory and must become personal to the learner through interaction with others. Learning is an active process involving mental and physical effort such as hands-on problem solving and as learners engage in learning they "own the learning."	Between Cognitivist and Constructivist
Kim	Learning is stored in memory and is an active process that is a fun part of life. Learning occurs through networking, interaction, and participation through persistent effort from the learner and through creating job embedded assignments.	Constructivist
Mary	Learning is personal and constructed from experience and involves making connections between learners, the content, and the instructor. Learning involves participation and collaboration and occurs by engaging the learner's emotions.	Constructivist
Grace	Learning involves building personal meaning through interaction and by considering divergent viewpoints. Learning is an active, social, hand-on process, and learners need to do something or create something in order to learn. Learning occurs through trying new skills, ideas, and concepts and adapting them for their own use.	Constructionist

Susan states that learners will learn through drill and practice and through the experience of using their newly acquired skills. Kim has a problem with using drill and practice strategies. Kim dislikes drill and practice assignments because drill and practice assignments stop before learning is applied in context and before learners have developed full understanding of the content. Kim asserts that learners need to go beyond showing

that they can complete the steps in sequence (Kim's description of the use of drill and practice). Although there is a place for drill and practice, Kim states that learners actually need to experience the process of pulling together what they have learned to create a job embedded assignment. Kim believes that the instructor may also need to redirect learners by using alternate strategies or activities if the strategy or activity used first does not make sense to the learner or connect with the ways that the learner learns. Kim's beliefs about the ways adults learn online are consistent with a constructivist perspective in that learning involves constructing meaning through experience.

While participants in this study differ in their views about how learning takes place they all agree that learning is an active process involving the effort and participation of the learner. Participants in this study assert that adults learn in a variety of ways in OPD courses. Learners may learn from what is in the course, from what the instructor adds to the course, and from interaction with other learners in the course. Adult learners learn from assignments, resources, online discussions, tutorials, drill and practice, and interaction.

Interaction promotes learning among adults. Learners interact with the course content, with other adult learners, and with the instructor. Instructors believe that using a variety of instructional strategies and delivering the content in a variety of formats helps adult learners learn online. Learners learn through self-expression, collaboration, and engagement with the content. Learning involves doing something, producing something, and/or creating something and then applying what has been learned in practical ways.

In addition to the instructor's beliefs about adult learning, it is also important to examine the instructor's beliefs about shaping online instruction for adult learners and the

purpose behind instructional assignments. One common theme that ties the beliefs of the five participants in this study together is that learning for adults in OPD courses must be useful, meaningful, relevant, practical, adaptable, and applicable to the work setting. In addition to instructor's beliefs about adult learning, it is also important to examine instructor's beliefs about shaping online instruction for adult learners and the purpose behind instructional assignments. The instructor's beliefs about shaping online instruction and the purpose of assignments are summarized in Table 18.

Participants believe that adults learn in a variety of ways in OPD courses. Adults need to practice new skills to gain fluency (Susan). Helping learners make connections with prior knowledge while adding new content helps adults learn (Heather). Instruction should be geared to the needs of the learners (Kim) and adaptable according to each learner's specific learning styles (Mary). Challenging advanced learners without frustrating other learners is a concern for Susan. Providing tiered assignments that allow the learner to choose an assignment from a group of increasingly more difficult assignments may challenge the more advanced learner (Mary, Susan). Additionally the instructor can differentiate assignments to match the needs of learners so that all learners have a chance to grow (Heather, Kim, Mary). Adult learners need challenging, interesting, and respectful tasks (Mary), and hands-on practice (Grace, Susan), opportunities to solve problems in a variety of ways (Kim, Heather), and the opportunity to create meaningful and challenging job related assignments.

In addition to beliefs about shaping instruction and the purpose of assignments in OPD courses, it is also useful to consider beliefs about the role of the instructor in an OPD course. Participants in the present study visualize the instructor in the role of a

Table 18

Instructor's Beliefs about Shaping Instruction

Instructor	Shaping Instruction	Purpose of assignments	Learning Theory
Susan	Adults need to practice and integrate new skills into assignments and to continue using new skills.	Useful, applicable in work setting and learners need the opportunity to correct and resubmit their work.	Between Behaviorist and Cognitivist
Heather	Adult learners need to put their learning into action, a course should contain content that builds on what learners know and add new content—an interesting and manageable course structure motivates learners and encourages full participation.	Practical, useful, adaptable and applicable in work context - Heather believes that learners need opportunities to get to know each other and develop cohesiveness.	Between Cognitivist and Constructivist
Kim	Instruction needs to be geared to the needs of learners. Sharing and collaboration extend learning and inspire branched thinking. Would like to use collaborative groups yet drop-out rates in OPD courses makes this problematic.	Job embedded assignments with choices for learners. Kim wants learners to understand their own learning processes and independently plan for future learning.	Constructivist
Mary	Adult learners need challenging, interesting, and respectful tasks. Content needs to be adaptable according to learners' needs and styles. Learner needs can be assessed with a learning style inventory at the beginning of a course.	Meaningful, useful, relevant learning that provides challenging tasks just beyond the learner's ability.	Constructivist
Grace	Adult learners learn through hands-on practice (can't just show it to them) while creating something meaningful and useful for their work environment.	Useful and applicable Learners need to take content and revamp it for their own needs, and need time to apply their learning in context.	Constructionist

flexible facilitator of learning and as a co-learner in OPD courses. Study participants agree that the instructor should make suggestions rather than placing demands on adult learners. The instructor should invite, embrace, and celebrate learning, model the love of learning, and display a positive attitude toward learning. Mary asserts that all OPD instructors working with adult learners should understand and use adult learning theory.

According to Mary, OPD instructors who apply the principles of adult learning theory can better address the needs of adult learners and better facilitate adult learning. The instructor, as a flexible facilitator, opens the door to learning, extends opportunities for learners to adapt and refine content, and assists learners with becoming more independent. Although the instructor facilitates learning for all learners, the needs and learning goals of each individual learner should not be ignored. The instructor's beliefs influence the perception of the ways learners interact with each other, with the instructor and with the course content.

Learners who share ideas and collaborate with each other extend learning and think in branched and creative ways according to Kim. Interaction and collaboration help learners gain new insights, consider different viewpoints, reflect on their own beliefs, interact with each other, and contribute to learning and become part of the course (Heather). While some learners embrace new ways of thinking as they learn the content in an OPD course, other learners only skim the surface (Heather). As surface learners begin to see ways that course concepts can be applied to activities they are engaged in, they get more involved in learning.

Through collaboration and interaction learners build on and add to each others ideas (Heather, Grace & Susan). Grace maintains that interaction and collaboration help

learners construct personal meaning. Grace believes online learning is all about collaboration yet feels that teachers have difficulty collaborating with each other. A theme that emerged from the data is that instructors believe that collaboration is an effective strategy for facilitating learning with adults in OPD courses; however, barriers exist that limit collaboration.

One barrier to collaboration is that teachers can be proprietary about their knowledge and ideas. Grace asserts that instructors need to encourage adults to share knowledge and ideas. Another barrier to collaboration is difficulty sharing multiple and large files within the LMS. Grace reflects on the difficulty that learners experienced when trying to share multiple and large PowerPoint files within the LMS. As a result of the technical issues with file sharing, Grace discontinued the use of collaborative group assignments. Another barrier to establishing collaboration in OPD courses is the dropout rate. Kim cites the high dropout rate as a barrier to creating and implementing collaborative group assignments. Heather and Mary also expressed concerns about learners dropping out of OPD courses.

Collaboration and interaction in OPD courses often occur through online discussions. While the interaction and engagement of learners in OPD courses has occurred through online discussion for some participants (Susan, Heather), other participants indicated that they had difficulty getting learners actively engaged in discussions (Grace). Mary asserts that learners want the instructor to participate and become involved in online discussions. Grace indicates that learners need to be trained to participate and contribute to discussions which in turn might help increase collaboration. Grace feels that older teachers could help train younger teachers to collaborate together.

Instructor beliefs also influence content organization and instructional sequencing. Each of the five participants in this study has a unique perspective on content organization and instructional sequencing. Beliefs about content organization are intertwined with beliefs about the ways adult learn. In a similar way, each instructor's beliefs about sequencing instruction links with their perception and beliefs about the ways adults learn in OPD courses. The instructor's beliefs about content organization and instructional sequencing are summarized in Table 19.

Instructors believe that content should be organized and presented in ways that help adult learners learn. While views about how the content should be organized are similar, each instructor has a specific focus. Susan is focused on using consistent structure. From Heather's viewpoint, content should build sequentially by gradually adding new concepts. Kim concurs with the use of consistent structure and adds that learners need multiple opportunities to engage with the content. Mary is focused on the careful selection of instructional strategies that encourage learning through interesting and authentic tasks. Grace feels that content should be organized and presented to learners via different types of media so that learners can learn through experiencing the content.

The five instructors assert that instructional sequencing should help focus learning for adults. While views about how instruction should be sequenced are similar, each instructor has a specific focus. Susan is focused on providing opportunities for practice and application of learning for the purpose of empowering the learner to become independent. Heather places importance on pacing instruction so that learners have time to become comfortable with introductory content before new concepts are delivered.

Table 19

Instructor's Beliefs about Content Organization and Instructional Sequencing

Instructor	Content Organization	Instructional Sequencing	Learning Theory
Susan	Content should be organized and presented in a consistent manner using consistent deadlines and providing feedback to learners in a consistent way.	Instruction is sequenced so learners practice and apply learning. Instruction should be sequenced to empower learners to find their own answers, and develop their own solutions to problems.	Between Behaviorist and Cognitivist
Heather	Cognitive strategies help organize content. Content should build on concepts that have already been introduced and additional new content should be added sequentially.	Clear, obtainable goals focus the course and direct learners. New concepts should build on what learners know and have learned in the course.	Between Cognitivist and Constructivist
Kim	Content should be organized around consistent, recurring structure using cognitive strategies like chunking and consistent presentation order. Learners need multiple opportunities to engage and interact with the content.	Instruction should be sequenced from easy to progressively more difficult content and concepts to encourage learners to connect with prior knowledge and to construct new meaning.	Constructivist
Mary	Use of relevant content that links to prior knowledge and encourages learning through interesting and authentic tasks.	Instruction should be sequenced to help learners make connections between the content, prior knowledge and the process of constructing knowledge through the application of the content	Constructivist
Grace	Content is organized and presented to learners through tutorials that may be written or presented via multimedia and can be experienced by the learner.	Instruction is sequenced around the concept that learners will take the content and revamp it based on their own needs for their own purposes.	Constructionist

Kim sequences instruction from easy to difficult and uses consistent course structures to assist learners. Mary asserts that instructional sequencing should help learners make connections between the content and prior knowledge while allowing learners to construct and apply new understandings. Grace supports the notion that instructional sequencing should be flexible, allowing learners to adapt and fit learning with their own needs and goals.

Instructor as Flexible Facilitator

In addition to sequencing instruction, it is also important to examine feedback, an instructional strategy that instructors use to communicate with learners. The OPD instructors in the present study use different types of feedback to confirm, correct, and inform learning with adults. The varied use of feedback as an instructional strategy is a theme that emerged from the data. All five participants in this study use different types of feedback to communicate with learners. Susan uses corrective feedback to direct learners to the correct responses. Susan also uses informative feedback to provide new information and content, such as tips to use additional features of MS Word, and to encourage learners to move toward becoming more independent users of the course content. Because the course is only 6 weeks long, Susan wants to empower learners to continue to learn and grow after the course ends. Kim is concerned that corrective feedback can "squelch" people and prefers to redirect learners with different opportunities and activities that can help them make sense of the content.

Confirmatory feedback is another tool that the instructors use to communicate with learners. Heather uses confirmatory feedback to support and encourage learners and applies corrective feedback when a learner has begun to understand a concept but has

some misconception. Heather uses informative feedback to share additional resources and to answer questions. Analytic feedback allows Heather to provide help when a learner has difficulty grasping a concept and integrating the concept into their assignments. While Mary makes some suggestions for correction to learners via feedback, her suggestions are typically informative and analytical and provide further resources and information to help enrich and deepen learning and also serve to help learners solve problems, gain new insights, and construct new meaning. Grace supports using analytical feedback in a way that provides hands-on, personal, and experiential learning opportunities that help learners develop their understanding of the content. For example, Grace takes a learner's PowerPoint presentation and "tweaks" a small part that has been problematic for the learner; next she returns it to the learner to complete the assignment. According to Grace, this process gives the learner an opportunity to engage with the content and learn from a personal and meaningful experience. Grace also uses informative feedback to direct learners to resources where they can search for the answers to their own questions. Grace supports and scaffolds learning, then gradually withdraws support as she encourages learners to develop more independence and self-direction in learning. Each instructor uses feedback in different ways at different times supporting the following theme that emerged from the data. The OPD instructor is a flexible facilitator of learning who uses different types of feedback to confirm, correct, and inform learning with adults.

Summary

This chapter examined seven themes that emerged from the data in regard to the instructor's beliefs about the ways that adults learn in OPD courses, beliefs about creating online learning environments for adult learners, and beliefs about instructional strategies

for facilitating adult learning. Seven themes emerged from the data and were matched for best fit with one of the three guiding questions for the study. The beliefs of the five participants were woven into a bricolage, or tapestry, to reveal rich insights through thick description and analysis. The following themes will be summarized next: making connections, meaningful learning, more effort required for learners, need for a comfort zone, need for support, collaboration and barriers that limit collaboration, and the instructor as flexible facilitator. Finally, the summary will conclude with a description of beliefs in action.

Making Connections

Adult learning in OPD courses is an active process involving interaction, participation, and effort through which learners make connections and apply knowledge and skills. Facilitating adult learning involves connecting with learners' experiences, interests, and background knowledge and providing time for learners to make connections between prior knowledge and the new concepts and ideas presented in an OPD course.

Meaningful Learning

Learning for adults in OPD courses must be useful, meaningful, relevant, practical, adaptable, and applicable to the work setting. Some learners excel at online learning while other learners are more successful and effective with learning in face-to-face environment. Learners differ in technology skills, prerequisite course skills, and in their attitudes and motivation toward learning. While instructors in the present study would prefer that adult learners were self-motivated and personally interested in OPD

course content, the study participants believe that the typical adult learner may be more motivated by the need for PLU course credits.

Adult learners vary in their ability to direct their own learning and manage their time. Instructors in this study try to nurture and support the needs of learners; however, the instructors want learners to develop their abilities to become more self-directing and responsible for their own learning. Many learners enroll in OPD courses that they do not complete. Learners may drop a course soon after it begins, and this is a concern among OPD instructors. Learning for adults in OPD courses requires more effort and commitment than learning in face-to-face professional development settings.

Need for a Comfort Zone

One way to help learners succeed with online learning is to build, support, and sustain a positive, comfortable, and safe OLE. A positive OLE can help learners overcome the isolation that can result when they do not see or know anyone. Isolation can be reduced by helping learners make connections with each other and with the instructor through the "human touch." The "human touch" involves treating people with kindness, respect, and by communicating in positive ways. Adult learners in OPD courses need a comfort zone where they can feel "safe" communicating and interacting with learners and the instructor. Instructors help create the comfort zone by communicating their expectations and through the provision of a warm, inviting, OLE in which adult learners feel safe and comfortable to ask questions.

Need for Support

Instructors implement a variety of strategies to support learners, such as using praise, positive feedback, encouragement, recognition, making empathetic comments,

and sharing personal experiences. Effective online communications can help establish, support, and sustain an OLE. The tone of the communication is as important as the message. Instructors can use emoticons to communicate the affective feelings behind their words and messages.

Providing a safe place to communicate is also important. Learners need to feel comfortable with communicating in the OLE and not be afraid that their mistakes will be used to embarrass them. Assignments that learners have difficulty with may need to be revised and clarified. Instructors do not want learners to become too frustrated or to spend too much time on one activity. Instructors assert that it is important to get to know the learner, and their goals, interests, and purposes for taking a course so that they can help each learner get what they need out of the course.

It is also important to understand the individual learning styles that support learner effectiveness in OPD courses. This knowledge helps the instructor shape the course for each learner. Sometimes the instructor can learn more about a person when they work together online than working together in a face-to-face environment. Learners need to feel comfortable working with the instructor. Instructors envision their role as facilitators of adult learning, who invite, model, encourage, nurture, challenge, and motivate learners to succeed in achieving their learning goals in positive, comfortable, and safe OLEs.

Collaboration and Barriers That Limit Implementation

The instructor's beliefs influence their perception of the ways that adult learners interact with each other, with the instructor, and with the course content. Instructors in the present study assert that collaboration and interaction are important parts of adult

learning online. A theme that emerged from the data is that instructors believe that collaboration is an effective strategy for facilitating learning with adults in OPD courses, however barriers limit collaboration. Barriers that prevent full use of collaboration include learners who do not know how to collaborate, the high drop out rate in OPD courses, and problems with file sharing within the LMS.

Instructor as Flexible Facilitator

Feedback is another important instructional strategy. All five participants in this study use different types of feedback with learners. Confirmatory feedback is used to support and encourage learners to submit quality work. Corrective feedback is used to help learners get closer to what they perceive as correct responses. Informative feedback is used to provide additional information and resources to learners. Analytical feedback assists learners who are having difficulty with an assignment or with grasping a concept. Analytical feedback helps learners understand how to apply what they have learned in authentic contexts. The final theme that emerged from the data examines the role of the instructor and the use of feedback. The OPD instructor is a flexible facilitator of learning who uses different types of feedback to confirm, correct, and inform learning with adults.

Beliefs in Action

Each participant in this study has unique beliefs about the ways that adults learn online and how instruction should be organized, sequenced, and presented. Adult learning in OPD courses involves an active process of making connections and applying knowledge and skills. Each instructor selects and uses instructional strategies according to their beliefs about the ways that adults learn. Each instructor's beliefs were analyzed and used to place them on a continuum of learning from behaviorism to constructionism. Ertmer

and Newby (1993) assert that there is a need to form a bridge between beliefs about human learning and theories of learning in order to better understand and solve instructional learning problems. Zinn (2004) notes the importance of clarifying a personal philosophy of adult learning and asserts that an adult educator's beliefs influence the selection of instructional content, ways of interacting with learners, and processes for evaluating learning outcomes.

Although participants in this study differ in their views about how learning takes place, all five instructors agree that learning is an active process requiring the participation and effort of the learner. It is a general consensus that learning for adults in an OPD course requires more effort and commitment than learning in face-to-face professional development settings. Another theme that emerged from the data is that learning for adults in OPD courses must be useful, meaningful, relevant, practical, adaptable, and applicable to the work setting.

This chapter identified seven themes that emerged from the data. Each theme was matched with one of three research questions. In the final chapter, I discuss the seven themes in the context of the literature reviewed in Chapter 2 and present implications for future research.

CHAPTER 11

DISCUSSION AND IMPLICATIONS

Introduction

This dissertation presents the results of an in-depth examination of instructor beliefs about adult learning in OPD courses, creating OLEs for adult learners, and using instructional strategies to facilitate online adult learning. Beliefs are defined as implicit assumptions about teaching, learning, learners, learning environment, and instructional content (Kagan, 1992). Seven themes emerged from the data. Each theme was matched for best fit with one of the three research questions that guided the study. The purpose of this chapter is to discuss each theme in the context of the questions that guide this study. This chapter will also explore the implications of the study, followed by recommendations for future study.

Data for this study included interviews, discussion postings, and online instructor journals, and data were collected from June 2006 through December 2006. Data were analyzed using the constant comparative method of Glaser and Strauss (1967). This study was guided by three questions:

1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?
2. What are the instructor's beliefs about creating an online learning environment for adult learners?

3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Discussion

This section will discuss the study's findings and situate the findings within the body of relevant research. The literature review presented in Chapter 2 was completed prior to the collection of data for the present study. To understand better and interpret the study's findings, I returned to the literature to examine additional resources. The new resources were added to Chapter 2 and included in this chapter. The following discussion is organized around the seven themes that relate to the three guiding questions.

Research Question 1

What are the instructor's beliefs about the ways that adults learn in online professional development courses?

Theme 1: Making connections. Instructors in the present study agreed that learning for adults in OPD courses should be an active process of making connections and applying knowledge and skills. Driscoll and Carliner (2005) describe the role of the learning from behaviorist perspective as a passive process, while the role of learning from the cognitivist and constructivist perspective is described as an active process. Susan's beliefs placed her on a continuum between behaviorism and cognitivsm, and she uses drill and practice, an instructional strategy associated with behaviorism (a more passive approach to learning), and data chunking (cognitive strategy), yet Susan stated that learning should be an active process (cognitive-constructivist concept). Vonderwell and Turner (2005) describe active learning as engagement with instruction that leads the learner think, question, reflect and collaborate. Susan's beliefs and approach to adult

learning can be described as eclectic. Snelbecker (1987) terms the use of instructional strategies congruent with more than one learning theory as theoretical eclecticism. The beliefs of the other four participants in the study were associated with theories that support an active approach to learning, for example cognitivism, constructivism and constructionism. Johnson and Aragon (2003) describe different techniques for providing active learning opportunities in an online setting. For example, learners engaged in creative activities, problem solving, and decision making are involved in active learning.

According to instructors in this study, learning involves making connections with the content, other learners, and with the instructor. Active learning requires learner participation in the course through interaction and participation. From a constructivist perspective, interaction provides opportunities for knowledge construction (McIsaac et al., 1999). Vonderwell and Turner (2005) report that undergraduate students in an online technology course actively sought answers to their own questions, used information from a variety of sources to answer questions, and were both challenged and engaged in learning. Results of a 3-year longitudinal study suggest that providing hand-on, active, learning opportunities enhances professional learning (Garet et al., 2001).

Instructors in the present study maintain that adult learners in OPD courses learn in a variety of ways including practice, interaction, collaboration, hands-on problem solving, personal discovery, and through creating and revising authentic, meaningful, and job related products. In a study of preservice teachers, Vonderwell and Turner (2005) reported that completing authentic projects served to improve learning and aid in retention of knowledge. Loucks-Horsley (1995) suggested that professional development

should shift from a pull-out training model to job-embedded learning model with opportunities for learners to apply newly learned skills on-the-job.

Viewpoints about the ways that adults learn may be influenced by different learning theories (Ertmer & Newby, 1993). While an instructor with behaviorist views about adult learning might favor drill and practice as an effective instructional strategy (Driscoll & Carliner, 2005) a constructionist may prefer that learners create and revise a meaningful, and job related product (Kafai & Resnick, 1996). Ertmer and Newby assert that learning theories provide a foundation for the selection of instructional strategies. Making connections, a theme in the present study, is also about linking new ideas to existing knowledge, a view supported by cognitive learning theory (Driscoll & Carliner, 2005).

Participants in the present study indicate that learning involves examining new concepts and variety, linking to prior knowledge, and taking theory and making it practical. Cognitive learning strategies help learners make connections with prior knowledge (Driscoll & Carliner, 2005). Participants in the present study regard learning as an act that is both mental and physical. Making learning practical and relevant involves helping learners make connections between their prior knowledge and new knowledge. It also involves helping learners make real world connections between what they know and what they are learning. Real world, authentic learning is the focus of constructivist learning environments (Driscoll & Carliner, 2005). Participants in this study suggest that instructors help learners make connections by assisting and supporting learners as they apply what they learn in the authentic context of their job setting. The assumptions of andragogy also support the conception that adult learning should center

on real life need (Knowles, 1980b, 1984). The participants' assertion that the instructor makes connections with the learner via the learner's experiences, interests, and background knowledge, are also consistent with Knowles' principles of andragogy.

Instructors want learners to take an active part in their learning through making their needs and learning goals known to the instructor. Participants in this study provided opportunities for learners to adapt assignments according to their needs. Active learning can also be examined from the perspective that instructors want learners to develop the skills to direct their own learning so that after the OPD course ends they will continue to find resources to support, extend, and apply their learning. Knowles (1968) asserts that adult learners have a need to be self-directing in learning. The tasks of online learning require learner skills with planning, monitoring, and managing their own learning (Dove, 2006; Eastmond, 1994; Howland & Moore, 2002; Song, 2005).

Theme 2. Meaningful learning. In addition to active learning and making connections, instructors participating in this study assert that learning for adults in OPD courses must be useful, meaningful, relevant, practical, adaptable, and applicable to the work setting. Instructors believe that learning for adults must connect with the learner's immediate needs and learning goals. Adult learners want course content to be job connected, interesting, and manageable.

Participants in the present study assert that the role of the instructor is as a flexible facilitator of learning who is willing to adapt assignments to meet the needs of the individual learner. In a mixed-method study, Heuer and King (2004) sought to understand the perceptions of adult educators (n = 324) about the role of OPD instructors in online and hybrid courses. The role of the OPD instructor was described as multidimensional,

encompassing the roles of planner, model, facilitator and communicator. Heuer and King describe the instructor as a facilitator, co-learner, and guide who fosters interaction and collaboration.

The perception of the role of the instructor in OPD courses is linked with learning theory (Driscoll & Carliner, 2005). For example, from a behaviorist perspective, the instructor provides a highly structured environment for learners to practice; from the cognitivist perspective the instructor structures the environment to help learners process and understand the content; from a constructivist perspective, the instructor serves as a guide or facilitator of learning. The participants in the present study fall along a continuum that ranges from behaviorism to constructionism (shown earlier in figure 1 on p. 159). Jonassen (1991b) proposed a continuum of learning ranging from objectivism to contructivism and posited that the majority of theorists fall in the middle of the continuum. Behaviorism falls within an objectivist position on the left side of the continuum; constructionism is at the right side just past constructivism. Three of the instructors (Heather, Kim, Mary) in this study fell in the middle of the continuum while one (Susan) was on the objectivist end and Grace was just past constructivism.

Placement on Jonassen's (1991b) continuum provided a starting point to examine each instructor's beliefs about learning and learning processes to look for a good fit with the instructional strategies and practices implemented by each instructor in their respective OPD course. For example, Susan used drill and practice (behaviorist strategy) and data chunking (cognitivist strategy) yet rather than viewing learning as a passive process (objectivist), Susan viewed learning as an active process (cognitivist). In contrast, Kim (constructivist) was opposed to using drill and practice as an instructional strategy.

Instead, Kim focused on providing additional activities and learning opportunities for learners who were not successful with constructing meaning from their first learning activity. In four of the cases (Heather, Kim, Mary and Grace) the instructor's beliefs about learning and the instructional strategies they implemented in their OPD course were consistent with their self identified statements about teaching and learning and the use of instructional strategies to facilitate online learning with adults. In one case (Susan) the instructor's stated beliefs about learning and the instructional strategies implemented in her OPD course spanned objectivist and cognitivist learning approaches. This approach is described as eclectic and is supported as a strong instructional approach by some researchers (Ertmer & Newby, 1993; Johnson & Aragon, 2003; Morrone & Tarr, 2005; Smith & Ragan, 1993; Snelbecker, 1987) while other researchers consider it a weakness (Bednar et al., 1991).

Instructors in this study noted that adult learners want to experience learning that is personally and professionally relevant. In a study of course design elements valued by adult learners in a blended learning environment, Ausburn (2004) noted that learners valued courses that provided personal options and customization in addition to relevant instructional goals. Professional relevance of online learning and assignments were noted as positive factors in the online learning experience of graduate students (Duncan, 2005). Lack of professional relevance was identified as a barrier that resulted in radio media professionals withdrawing from an online course (Maor & Volet, 2007). A finding in the present study is that adult learners want learning to be useful and applicable to the work setting. Feist (2003) conducted a case study of 10 online instructors in a college setting to find out what type of professional development opportunities they preferred. Findings

indicate that instructors wanted learning opportunities that linked with their current online teaching projects and with learning that they could put to use immediately. Knowles' (1980b, 1984a) principles of andragogy indicated that adult learners want learning to fit with their immediate needs. In the present study, Grace indicated that it is important for the learner to create a useful job-related product. Similarly, Kafai and Resnick (1996) reported that adults want to create something useful while they are engaged in learning interesting and manageable content.

Participants in the present study view the OPD instructor as a flexible facilitator of learning, a view also supported in the literature (Heuer & King, 2004; Knowles, 1980a; Maor, 2003). Sellers (2001) explored the pedagogical implications of the shift from classroom to online instruction experienced by five high school teachers who created and taught an online course for high school students. The teachers described their role as either a facilitator or as a guide who structures the learning environment to engage and encourage student learning. The view of the instructor as a facilitator is a shift from the behaviorist, teacher centered, transmission mode of teaching to a view of a learner centered model of instruction (Knowles, 1975).

Participants in the present study noted the importance of being flexible and willing to adapt assignments to meet the needs of adult learners. Related to the concept of adaptability is the belief that instruction can be individualized or differentiated for learners by the instructor. In a study of adult learners in a blended learning setting, the ability to customize and individualize instruction was ranked as the most important feature contributing to success in blended learning (Ausburn, 2004). Many et al. (2004) noted that success for adult learners in online environments may be influenced by the

instructor and learner's willingness to work together to individualize instruction. Instructors in the present study thought it was important to adapt assignments for learners. Perhaps this fits with the needs of adults to be self-directed in learning, which is one of Knowles' (1984a) principles of andragogy.

Instructors in the present study indicate that learners need time to make connections, and time to apply their learning in context. Both the context of learning and the context of applying learning are important. Contextual applicability or being able to take what is learned and apply it in the context of the job setting is a crucial part of learning for adults (Johnson & Aragon, 2003).

Theme 3: More effort required for learners. Instructors in the present study maintain that adult learners are likely to be newcomers to online learning and may not fully understand the time and effort required to be successful with learning in an OPD course. Additionally, learners have varied skills with technology and with the prerequisite skills required for specific OPD courses. Instructors indicate that the learner's attitude and motivation toward learning influence their commitment to learning in an OPD course, and may impact the learner's ability to be successful.

Instructors in the present study assert that learning for adults in OPD courses requires more effort and commitment than learning in face-to-face professional development settings. Study participants maintain that learners have different levels of skill with online learning and may have little understanding of the time and effort required for success in an online learning environment. Schrum and Hong (2002) reported that learners who viewed online learning as quick and easy often discovered that taking an online course was more challenging than taking a face-to-face course. Bathe (2001)

conducted a qualitative study of community college faculty and staff (*n* = 39) who reported that students had misconceptions about the necessary skills and time required for online learning. College faculty (*n* = 20) and staff (*n* = 4) indicated that many students were not always prepared to take online courses and were not given adequate guidance (from counselors) to establish realistic expectations for online courses. Online learning requires a substantial time commitment for learners (Dove, 2006; Palloff & Pratt, 2003). The time commitment needed for success in online learning was cited as a barrier for both learners and the instructor (Kochtanek & Hein, 2000).

Instructors in the present study indicated that learners have varied skills with technology. Some learners experience technical difficulty with uploading, downloading and attaching files while other learners may have difficulty using basic computing hardware such as a mouse. Technical difficulties experienced by online adult learners foster negative feelings towards online learning (Bathe, 2001), can lead to frustration and anxiety (Hara & Kling, 2000), and are considered a barrier to success (Kochtanek & Hein, 2000). Schrum and Hong (2002) noted that online learning is more challenging if students have to learn both the technology and the content. Participants in the present study believe that learners who get too frustrated are likely to drop the OPD course. In a study among radio media professionals, Maor and Volet (2007) described the technical problems learners experienced as overwhelming and frustrating, noting that learners disengaged and later dropped the course. Numerous studies report technical problems as a barrier for online learners (Bathe, 2001; Dove, 2006; Holcombe, 2001; Howland & Moore, 2002). Duncan (2005) provides an account of learners overcoming technical challenges. Technical prowess for online learners is linked with active engagement and

learning enjoyment (Harmon & Jones, 2001). Learners who are more comfortable with computer technology are more comfortable with online learning (Goodwin, 2006).

Instructors in the present study indicated that learners may experience difficulty with using and navigating within the LMS. Killion (2000b) indicates that helping learners become familiar with online learning including how to use the LMS to navigate through the course are crucial components of learner success. Learner knowledge and understanding of online learning environments were also linked with learner satisfaction (Gunawardena & Duphorne, 2000). One approach to assist new online learners is to begin a course with simple assignments, thus giving learners time to acclimate to the online environment (Duncan, 2005). Another approach involves creating and using supportive pre-course activities to help learners understand the roles and responsibilities of online learning and contribute to learner readiness (Mykota & Duncan, 2007).

According to instructors in the present study, some learners do not have the prerequisite skills needed to begin specific OPD courses. Without prerequisite course skills, learners will need more time to complete an OPD course successfully. Instructors in the present study suggested possible solutions for the improving better course catalog descriptions, conducting better screening for prerequisite skills, communicating course and instructor expectations and using a blended learning strategy where instructors can provide one-on-one assistance for more needy learners. King (2002) noted that participants (n=15) engaged in learning in a blended course benefited from increased clarity of communications, and availability of face-to-face technical support. As peer-to-peer interaction and collaboration increased, learner dependence on the instructor decreased. Participants in a study conducted by Schrum and Hong (2002) noted that using

a screening process to select potential learners who were more self-motivated helped insure learner success and retention in online programs.

Instructor in the present study noted that learners vary in their attitude and motivation towards learning. Instructors maintain that the attitude and motivation of the learner influences the learner's chances for the successful completion of an OPD course. In a study of 14 expert online educators (instructors and course developers), Schrum and Hong (2002) indicated that learner motivation and attitude toward learning are factors that influence learner success in online courses. Learner readiness was correlated with learner satisfaction and learners who were better prepared to participate in online learning experienced greater self-efficacy (Gunawardena & Duphorne, 2000).

Research Question 2

What are the instructor's beliefs about creating an online learning environment for adult learners?

Theme 4: Need for a comfort zone. Participants in the present study maintain that adult learners in OPD courses need a comfort zone where they can feel "safe" communicating and interacting with learners and the instructor. The term community has been used to describe an online learning space that is comfortable, safe, and promotes trust and respect (Conrad, 2005). Instructors in the present study believe it is important to get to know the learner and the learner's needs. All instructors in this study begin their OPD course with introductory activities. Introductory activities encourage learners to share information about their personal and professional lives (Conrad & Donaldson, 2004). McInnery and Roberts (2004) describe the introductory phase of an online course as the forming stage, which they indicate will assist in the creation of community.

Instructors in the present study feel that a light, warm atmosphere helps learners feel comfortable and safe. This conception of developing a warm environment for adult learners was an integral part of Knowles's (1975) description of an adult learning space. Participants in this study indicated that the instructor's style of communicating with learners can influence the establishment of the OLE. Instructors also indicated that they preferred to make suggestions to learners rather than making demands of learners.

Overcoming the isolation of the learner is a concern for participants in the present study. Instructors expressed concern about the isolation of distance learners in OPD courses and felt that isolation can be overcome through the "human touch." Duncan (2005) reports a similar finding that learners want the instructor to be present in the course, to listen, and to respond to learners through the "personal touch." Huang (2002) noted constraints with online learning, including the loss of humanity and the social isolation of the learner. Instructors in the present study indicated that the "human touch" promotes human to human connections across cyberspace. Instructors think it is important to treat others like you would want to be treated. Kim states, "I just treat them like they are my own child and I know that some of them need more time and I know that some of them [need] hands-on, I know that some of them need nurturing."

In addition to nurturing learners, instructors in the present study use additional strategies to build a positive OLE. Praise, positive feedback, and kind, encouraging comments serve to build learner confidence and engage learner emotions while also supporting positive perceptions of the OLE. Participants indicate that the use of mile-stones help learners note progress through the course and encourages learners to celebrate their accomplishments. Celebrating accomplishments strengthens human to human

connections and helps maintain learner motivation. Instructors in the present study assert that sharing empathetic comments and personal experiences with learners helps build and sustain the OLE. Instructors maintain that communications with a positive tone helps build and sustain the comfort zone for learners. Vonderwell (2003) notes that clear communication and writing helps the instructor communicate effectively with the learner and also helps prevent the learner from misunderstanding the instructor's intent.

It is important for learners to feel safe in the OLE. Instructors in the present study noted that adult learners need to feel that they can make mistakes and not be ridiculed or embarrassed. Instructors indicate that treating learners as professionals helps to establish a safety zone for adult learners. Other researchers note the importance of providing clear communication and making course expectations known (Lewis & Abdul-Hamid, 2006; Whipp, 2003). Communicating the instructor's expectations to learners helps learners understand the dynamics of the OLE. Dennen et al. (2007) noted that learners feel more secure when they explicitly understand the expectations of the instructor. In addition to communicating expectations, instructors in the present study felt it important to make sure that learners are not "too frustrated," to know which learners need to be "pushed," and to provide additional help and support to the more needy learners. When an assignment is too frustrating for learners, revising, rewriting, and clarifying the assignment is better than blaming the learner.

Participants in this study assert that understanding the learning styles, goals, and interests of adult learners helps establish a comfort zone for learners and assists the instructor with facilitating adult learning. Schrum and Hong (2002) indicated that understanding the learning styles of course participants helps instructors meet the needs

of learners by providing for multiple learning modalities. Participants in the present study assert that keeping the course professionally focused influences learner perception of the OLE. Instructors maintain that it is important for learners to get to know the instructor and believe that it takes time to develop a relationship between the learner and instructor. Establishing a relationship between the learner and the instructor helps establish a comfortable OLE. Smith, Ferguson, and Caris (2002) reported that personalities are built through online communications and during the course the instructor has opportunities to get to know the learner through their writing.

Theme 5: Need for support. Instructors in the present study assert that adult learners need varying amounts of encouragement, support, guidance, and nurturing within a positive OLE that supports and sustains them. Howland and Moore (2002) noted that learners who were less self-reliant needed more structure, support, and feedback from the instructor whereas more independent learners required less support. Participants in the present study believe that it is important for the instructor to understand how adults learn and apply adult learning theory to help develop a positive OLE. Modeling, challenging, and motivating learners, constructing positive communications, and establishing high expectations for learners are techniques that the instructors in this study suggest for building a positive OLE. Instructors think it is important to understand each learner's goals, for example what each learner hopes to achieve in their OPD course. Instructors want every learner to be successful, yet they believe that success for each learner is an individual conception based on the specific needs and goals of the learner. Learners also contribute to the OLE and through their interaction and participation they become part of the course. Learner attitude and motivation influences the OLE.

Instructors in this study note that the OLE should be built around the specific needs of the learner. Knowledge of the learner's needs and goals helps the instructor build a safe and supportive environment. Each learner may confront different challenges with learning in an OPD course and may have different needs in regard to the OLE. Blair and Hoy (2006) note that online environments provide different challenges for adult learners and asserted that a flexible instructor is poised to help meet learner needs. Participants in the present study note that the instructor's beliefs and attitudes about adult learners influence the OLE. The instructor creates, supports, and sustains a positive OLE through the development and extension of the "human touch" and through the tone of course communication. Goodwin (2006) supports this conception that the online instructor's responsiveness, availability, presence, and manner of communicating (tone) influence the learner's success.

Research Question 3

What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Theme 6: Collaboration and barriers to implementation. Instructors in the present study indicated that collaboration is an effective strategy for facilitating learning with adults in OPD courses, yet existing barriers limit collaboration. Learning occurs through interaction, collaboration, and engagement with the content. Interaction and collaboration inspire branched and creative thinking and self-expression. As learners consider new insights, diverse viewpoints, and different ways of thinking they begin making connections and constructing knowledge. Instructors maintain that collaboration engages learners and generates enthusiasm for learning. The view of collaboration as a useful

strategy to support online learning is linked to increased level of reflection (Lord & Lomica, 2007).

Instructors in the present study assert that barriers limit collaboration in OPD courses. Instructors note that adults can be proprietary about knowledge limiting their willingness to share with colleagues. Instructors reported having difficulty developing engagement, interaction, and collaboration among learners when using asynchronous discussions. Another noted barrier is the large drop out rate in OPD courses. Finally, one instructor noted having difficulty with file sharing within the LMS. Suggestions for overcoming these barriers include training learners to participate in online discussion and encouraging learners to share their ideas. Instructors could use different tools for communicating ideas. For example, instructor and present study participant Grace recommended using digital voice boards as opposed to the text based discussion boards currently in use. Eastmond (1994) asserts that online learners would benefit from the inclusion of tools to add motion, audio, and kinesthetic features to online learning. Finally, although instructors in the present study believe collaboration is important, not enough collaboration is taking place in their OPD courses. Literature about online collaboration indicates that establishing collaboration in OLEs is considered difficult and frustrating for learners (Fung, 2004; Vonderwell, 2003). Jetton (2004) indicates that the role of the instructor is crucial in the development of a collaborative environment in which learners feel safe to share ideas and develop their own voices. Providing learners with support for collaboration in the form of tools to monitor and assess their collaborative efforts can assist in developing collaboration in OLEs (Zumback et al., 2006).

Theme 7: Instructor as flexible facilitator. The OPD instructor is a flexible facilitator of learning who uses different types of feedback to confirm, correct, and inform learning with adults. Feedback is an important instructional strategy that serves many purposes, including confirming and encouraging learner contributions, correcting learner work, informing learners about additional resources, and analyzing areas of learner difficulty. Instructor beliefs about the ways adults learn influences their use of feedback. For example, Kim holds constructivist views of learning and does not use corrective feedback because she indicates that "we squelch people when we correct them." Instead, she uses analytical and informative feedback and provides different activities if the learner is not successful with the first activity.

The OPD instructor uses different types of feedback to confirm, correct, and inform learning with adults. Instructors in this study note that feedback may be used in a variety of ways, such as supporting the OLE, directing the learner toward correct answers, correcting misunderstandings, encouraging learners to think in different ways, and sharing additional resources. Instructors can use feedback to help learners trouble-shoot problems, to provide opportunities for hands-on experimental learning, and to support and scaffold instruction. Instructors assert that while some instructional strategies or instructional activities are effective with some learners, other learners will need multiple opportunities, alternative strategies, and different assignments for learning to take place.

Morris et al. (2005) maintain that although instructors provide evaluation feedback, group feedback, individual feedback (disagreement, probing), and social feedback, the amount and frequency of the feedback provided differs among instructors.

McIsaac et al. 1999 suggests that the instructor provides feedback to the whole group and to individual learners and notes that a lack of feedback from the instructor to the learner can result in learner isolation. In a qualitative study of exemplary online faculty, Lewis and Abdul-Hamid (2006) reported that feedback was used to inform students about the instructor's expectations for assignments before the assignments were submitted. Other uses of feedback included following-up on student contributions and assignments, encouraging students, and prompting no-shows to appear online. Exemplary instructors indicated that using a variety of feedback strategies helped establish instructor presence in online courses.

Implications

What can be learned from this study of five instructors and their beliefs about adult learning in OPD courses? This study provides an in-depth examination of the beliefs of five OPD instructors about the ways adults learn in OPD courses, beliefs about creating OLEs, and beliefs about instructional strategies for facilitating adult learning online.

This study was guided by three questions:

1. What are the instructor's beliefs about the ways that adults learn in online professional development courses?
2. What are the instructor's beliefs about creating an online learning environment for adult learners?
3. What are the instructor's beliefs about the use of instructional strategies to facilitate online learning with adults?

Research Question 1

The results of this study indicate that instructors believe that active learning provides the best opportunities for adult learners to make connections between prior knowledge and new learning. Adult learners need time to practice what they learn and apply relevant learning in authentic contexts. Practical learning that is useful in the learner's job environment is valued. Adapting assignments and activities for the best fit with the learner's goals is recommended. The instructor can help the learner customize instruction to match the individual needs of the learner while creating challenging and meaningful assignments that take the learner beyond what they already know. Instructors assert that adult learners need a better understanding of the work and effort required to be a successful online learner before they begin a new OPD course.

Implications for OPD Instructors

- Consider using different tools and new techniques to develop learner engagement, interaction, and collaboration.
- Train course facilitators on customizing course content and/or course tools to meet the varied needs of adult learners

Implications for Adult Online Learners

- Adult learners need know that online learning will require a substantial time commitment.
- Learners need time to practice and apply learning
- Proving a training program for adult learners to help learners identify strategies to become successful with online learning would be helpful

Research Question 2

Building and sustaining a positive, supportive, and safe OLE is an essential component for adult learner success in OPD courses. Adult learners want to feel safe and comfortable as they interact with learners and with the instructor. Helping each learner

succeed in OPD involves getting to know the learner, and helping the learner meet individual learning goals, thus fulfilling the learner's purpose for taking the course. To help each learner, the instructor provides support and guidance and nurtures the learner in differing amounts according to instructor's perception of the learner's needs. The knowledge and background information that each instructor gains about the learner provides data to support the decision making process that determines the instructor's level of support and the instructor's level of "push" or prompting necessary to meet the needs of each learner.

Implications for OPD Instructors

- Provide more training for OPD instructors about techniques to establish a positive OLE
- Train instructors to understand better the various needs of adult online learners and build a more in-depth understanding of how the needs of the individual learner may be met in an OPD course (goals, support, feedback, nurturing)

Implications for Adult Online Learners

- Teach learners to explore their own needs as active learners in OPD courses through reflection, metacognition, and questioning
- Training for new online learners can teach learners how to use different tools for more effective communication
- Learners need to know that they can contribute to or detract from the OLE

Research Question 3

While each instructor who participated in the present study talked about various instructional strategies used in OPD courses, collaboration and feedback emerged most prominently. Instructors believe that collaboration helps learners think beyond their own perspective while considering diverse viewpoints. Instructors want learners to engage in more collaborative activities. Strategies are needed to overcome the barriers that limit

collaboration. Learners need to be encouraged to share their ideas through collaborative conversation in asynchronous discussions and via other techniques such as audio tools and synchronous activities. The large drop out rate from OPD courses needs to be explored and techniques developed and implemented to retain OPD learners. The difficulties associated with sharing multiple files within the LMS need to be addressed.

Providing feedback is an essential component for confirming, correcting, supporting, informing and analyzing learning with adults in OPD courses. Some instructors were opposed to using a particular type of feedback, while other instructors were comfortable using it because it "fit" their beliefs about the ways adults learn in OPD courses. New techniques for providing feedback could be explored. For example using voice recordings, providing virtual instructor office hours, and offering opportunities for synchronous meetings.

Implications for OPD Instructors

- Study the barriers that make collaboration in OPD courses difficult and find solutions
- Establish expectations for two-way communications
- Explore different techniques for providing feedback, such as recorded messages

Implications for Adult Online Learners

- Train learners about the various ways to establish collaboration in OPD courses
- Begin by pairing learners (dyads) to establish learner-to-learner relationships

Implications for the School District Professional Development Department

While the focus of this study was on instructor beliefs about adult learners, online learning environments, and instructional strategies for facilitating online learning for

adults, this study also has implications for the school district professional development department. OPD instructors need training opportunities to learn new techniques and strategies to support active learning in online learning environments. Instructors need hands-on experience with using new tools (wikis, blogs, voice tools, etc.) and support as they implement the tools in the courses they teach (contextual applicability). OPD instructors are adult learners who need to be supported and nurtured in a safe learning environment.

In addition to training opportunities, OPD instructors need a safe, sustained professional learning environment to develop professional relationships with other OPD instructors and with members of the professional learning department. This study noted the importance and impact of the beliefs of OPD instructors on the use of learning theories and instructional strategies. OPD instructors would benefit from engaging in learning activities and discourse focused on clarifying their beliefs about adult learning in online and blended learning settings. OPD instructors need to be immersed in adult learning theory. OPD instructors would benefit from participating in an ongoing professional learning community focused on adult learning in online and blended learning settings. This safe environment should provide opportunities for all participants to reflect on beliefs and instructional practices and to share experiences as they implement new tools and strategies within OPD courses.

Recommendations for Future Research

This study builds on the small base of information about OPD for adult educators in K-12 settings. The examination of instructor beliefs provides a better understanding of instructor concerns, OLEs, and instructional strategies for the facilitation of adult

learning. While this study presents the beliefs of five OPD instructors and contributes to the body of knowledge about online learning with adults, there are many questions that remain to be asked and many topics that merit exploration. For example, the questions in this study could be examined from the perspective of the learner.

- What are the adult learner's beliefs about the ways they learn in OPD courses?
- What are the adult learner's beliefs about creating an online learning environment for adult learners?
- What are the adult learner's beliefs about instructional strategies to facilitate learning with adults?

Additional topics for research might include the following questions:

- Does taking an OPD course increase the learner's ability to be self-directing in learning?
- Does the use of voice tools help promote collaboration among adult learners in OPD courses?
- How does the use of synchronous tools in OLE influence adult learning?
- How does the use of a hybrid classroom or blended learning strategy influence learning with adult learners?

The results of this study have implications for the design, development, implementation, and evaluation of training programs for OPD instructors and for the design, development, implementation, and evaluation of OPD courses. Another implication is for the design, development, implementation, and evaluation of training materials to teach adult learners about learning in OPD courses so that each learner who enrolls in an OPD course is trained and prepared for success in meeting their learning goals prior to taking their first OPD course.

With the rapid growth of OPD it is important to reflectively consider methods for creating online learning environments that fully embrace collaboration. Utilizing new

tools and techniques that empower adult learners to make connections through meaningful learning opportunities, in comfortable, supportive, and flexible environments, is a step toward creating successful learning opportunities that hold the power to transform learning for adults. Harasim states:

> The convergence of the computer network revolution with profound social and economic changes has lead to a transformation of education at all levels. The new paradigm of collaborative networked learning is evident in the new modes of course delivery being offered, in the educational principles that frame the educational offerings, the new attributes that shape both the pedagogies and the environments that support them and that yield new educational processes and outcomes (2000, p. 59).

This study explored the beliefs of five OPD instructors about adult learning in OPD courses, online learning environments for adult learners, and instructional strategies to facilitate online learning. In better understanding instructor beliefs we grasp a key to unlock and explore new tools and techniques that can empower and enable adult learning in online professional development settings. It is hoped that this study will add to the body of knowledge and assist instructors and adult learners achieve success in online learning environments.

References

Abramson, G., & Ellis, T. (2000). Defining a distant environment for teacher education. In D. A. Willis, J. D. Price & J. Willis (Eds.), *Proceedings of the Society for Information Technology & Teacher Education International Conference* (pp. 16-21). San Diego, California: Association for the Advancement of Computing in Education.

Alexander, S., & Boud, D. (2001). Learners still learn from experience when online. In J. Stephenson (Ed.), *Teaching and learning online: Pedagogies for new technologies* (pp. 3-15). London: Kogan Page.

Ally, M. (2004). Foundations of educational theory for online learning. In T. Anderson & F. Elloumi (Eds.), *Theory and practice of online learning* (pp. 3-31). Athabasca, AB, Canada: Athabasca University. Retrieved from http://cde.athabascau.ca/online_book/pdf/TPOL_chp01.pdf

Anderson, T. (2004a). Teaching in an online learning context. In T. Anderson & F. Elloumi (Eds.), *Theory and practice of online learning* (pp. 273-294). Athabasca, Canada: Athabasca University. Retrieved from http://cde.athabascau.ca/online_book/pdf/TPOL_chp11.pdf

Anderson, T. (2004b). Toward a theory of online learning. In T. Anderson & F. Elloumi (Eds.), *Theory and practice of online learning* (pp. 33-60). Athabasca, Canada: Athabasca University. Retrieved from http://cde.athabascau.ca/online_book/pdf/TPOL_chp02.pdf

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks, 5*(2), 1-17.

Ausburn, L. J. (2004). Course design elements most valued by adult learners in blended online education environments: An American perspective. *Educational Media International, 41*(4), 327-337.

Bathe, J. (2001). *Love it, hate it, or don't care: Views on online learning*. East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED463805)

Baumgartner, L. M. (2001, Spring). An update on transformational learning. *New Directions for Adult & Continuing Education, 89*, 15-24.

Bednar, A. K., Cunningham, D., Duffy, T. M., & Perry, J. D. (1991). Theory into practice: How do we link? In G. J. Anglin (Ed.), *Instructional technology: Past, present, and future* (pp. 17-34). Englewood, CO: Libraries Unlimited.

Bennett, S., & Lockyer, L. (2004). Becoming an online teacher: Adapting to a changed environment for teaching and learning in higher education. *Educational Media International, 41*(3), 231-244.

Berge, Z. L. (2002a). Obstacles to distance training and education in corporate organizations. *The Journal of Workplace Learning, 14*(5), 182-189.

Berge, Z. L. (2002b). Active, interactive, and reflective learning. *Quarterly Review of Distance Education, 3*(2), 181.

Berge, Z. L., Muilenburg, L. Y., & Haneghan, J. V. (2002). Barriers to distance education and training. *Quarterly Review of Distance Education, 3*(4), 409-418.

Birman, B. F., Desimone, L., Porter, A. C., & Garet, M. S. (2000). Designing professional development that works. *Educational Leadership, 57*(8), 28-33.

Blackboard Academic Suite™ (Version 6.0) [Software]. Available from http://www.blackboard.com

Blair, K., & Hoy, C. (2006). Paying attention to adult learners online: The pedagogy and politics of community. *Computers and Composition, 23*(1), 32-48.

Bonk, C. J. (2001). *Online teaching in an online world.* Retrieved August 25, 2005, from http://www.jonesknowledge.com/pdf/faculty_survey_report.pdf

Bonk, C. J., Wisher, R. A., & Lee, J.-Y. (2004). Moderating learner-centered e-learning: Problems and solutions, benefits and implications. In T. S. Roberts (Ed.), *Online collaborative learning: Theory and practice* (pp. 54-85). Hershey, PA: Information Science Publishing.

Boyle, B., While, D. & Boyle, T. (2004). A longitudinal study of teacher change: What makes professional development effective? *Curriculum Journal, 15*(1), 45-68.

Brockett, R. G., & Hiemstra, R. (1991). *Self-direction in adult learning: Perspectives on theory, research, and practice*. New York: Routledge.

Brookfield, S. D. (1986). *Understanding and facilitating adult learning*. San Francisco: Jossey-Bass.

Browne, E. (2003). Conversations in Cyberspace: A study of online learning. *Open Learning, 18*(3), 245-259.

Butler, D. L., Novak, H. J., Beckingham, B., Jarvis, S., & Elaschuk, C. (2001). *Professional development and meaningful change: Towards sustaining an*

instructional innovation. Paper presented at the annual meeting of the American Educational Research Association.

Calderhead, J. (1996). Teachers: Beliefs and knowledge. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 709-725). New York: McMillan.

Candy, P. C. (1991). *Self-direction for lifelong learning: A comprehensive guide to theory and practice*. San Francisco: Jossey-Bass.

Carlile, O., & Jordan, A. (2005). It works in practice but will it work in theory? The theoretical underpinnings of pedagogy. In G. O'Neill, S. Moore & B. McMullin (Eds.), *Proceedings of the Emerging Issues in the Practice of University Learning and Teaching*. Dublin, Ireland: All Ireland Society for Higher Education.

Charmaz, K. (2006). *Constructing grounded theory*. Thousand Oaks, CA.: Sage.

Chizmar, J. F., & Williams, D. B. (1997, December 2-5, 1997). Internet delivery of instruction: Issues of best teaching practice, administrative hurdles, and old-fashioned politics. *Proceedings of the CAUSE 97: The Information Profession and the Information Professional*, Lake Buena Vista, FL. Retrieved from http://www.educause.edu/ir/library/pdf/CNC9703.pdf

Conrad, D. (2005). Building and maintaining community in cohort-based online learning. *Journal of Distance Education, 20*(1), 1-20.

Conrad, R. M., & Donaldson, J. A. (2004). *Engaging the online learner: Activities and resources for creative instruction*. San Francisco: Jossey-Bass.

Corey, S. M. (1957). Introduction. In N. B. Henry (Ed.), *In-service education for teachers, supervisors, and administrators: The fifty-sixth yearbook of the National Society for the Study of Education* (Vol. 56, Part I, pp. 1-10). Chicago: University of Chicago Press.

Courtney, S., Vasa, S., Luo, J., & Muggy, V. (1999). *Characteristics of adults as learners and implications for computer-based systems for information and instruction.* East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED451340).

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed method approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Davis, S. M. (2001). What e-learning can learn from history. *USDLA Journal*, *15*. Retrieved from http://www.usdla.org/html/journal/OCT01_Issue/article01.html

Dennen, V. P., Darabi, A. A., & Smith, L. J. (2007). Instructor-learner interaction in online courses: The relative perceived importance of particular instructor actions on performance and satisfaction. *Distance Education, 28*(1), 65-79.

Denzin, N. K. (2004). Prologue: Online environments and interpretive social research. In M. D. Johns, S.-L. Chen & G. J. Hall (Eds.), *Online social research: Methods, issues, & ethics* (pp. 1-12). New York: Peter Lang.

Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 1-32). Thousand Oaks, CA: Sage.

Desimone, L. M., Porter, A. C., Garet, M. S., Yoon, K. S., & Birman, B. F. (2002). Effects of professional development on teachers' instruction: Results from a three-

year longitudinal study. *Educational Evaluation and Policy Analysis, 24*(2), 81-112.

Dick, W., & Carey, L. (1996). *The systematic design of instruction*. (4th ed.). New York: Longman.

Discourse. (n.d.) In Merriam-Webster's online dictionary. Retrieved February 26, 2006, from http://merriamwebster.com/

Dove, S. C. (2006). *Critical elements and barriers to learning online: As identified in transition graduate coursework.* Unpublished doctoral dissertation, The University of Kansas, Lawrence.

Driscoll, M., & Carliner, S. (2005). *Advanced web-based training strategies: Unlocking instructionally sound online learning*. San Francisco: Pfeiffer.

DuFour, R., & Eaker, R. (1998). *Professional learning communities at work: Best practices for enhancing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.

Duncan, H. (2005). On-line education for practicing professionals: A case study. *Canadian Journal of Education, 28*(4), 874-896.

Dunlap, J. C. (2005). Workload reduction in online courses: Getting some shuteye. *Performance Improvement, 44*(5), 18-25.

Eastmond, D. V. (1994). Adult distance study through computer conferencing. *Distance Education, 15*(1), 128-152.

Easton, S. S. (2003). Clarifying the instructor's role in online distance learning. *Communication Education, 52*(2), 87-105.

El Mansour, B., & Mupinga, D. M. (2007). Students' positive and negative experiences in hybrid and online classes. *College Student Journal*, 41(1), 242-248.

Ertmer, P. A. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration? *Educational Technology Research and Development, 53*(4), 25-39.

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 6*(4), 50-72.

Fang, Z. (1996). A review of research on teacher beliefs and practices. *Educational Research, 38*(1), 47.

Fein, A. D., & Logan, M. C. (2003, Winter). Preparing instructors for online instruction. *New Directions for Adult & Continuing Education, 100*, 45-55.

Feist, L. (2003). Removing barriers to professional development. *T.H.E. Journal, 30*(11), 30-36.

Fenstermacher, G. D., & Berliner, D. C. (1985). Determining the value of staff development. *The Elementary School Journal, 85*(3), 281-314.

Ferdig, R. E., & Roehler, L. R. (2003). Student uptake in electronic discussions: Examining online discourse in literacy preservice classrooms. *Journal of Research on Technology in Education, 36*(2), 119-136.

Feuer, D., & Geber, B. (1988). Uh-oh . . . second thoughts about adult learning theory. *Training, 25*(12), 31.

Fullan, M. G. (1995). The limits and potential of professional development. In T. R. Guskey & M. Huberman (Eds.), *Professional development in education: New paradigms and practices* (pp. 253-267). New York: Teachers College Press.

Fung, Y. Y. H. (2004). Collaborative online learning: Interaction patterns and limiting factors. *Open Learning, 19*(2), 135-149.

Garet, M. S., Porter, A. C., Desimone, L., Birman, B., & Yoon, K. S. (2001). What makes professional development effective? Results from a national survey of teachers. *American Educational Research Journal, 38*(4), 915-945.

Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly, 48*(1), 18-33.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105.

Gaytan, J., & McEwen, B. C. (2007). Effective online instructional and assessment strategies. *American Journal of Distance Education, 21*(3), 117-132.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research* (1999 ed.). Hawthorne, NY: Aldine de Gruyter.

Gold, S. (2001). Constructivist approach to online training for online teachers. *Journal of Asynchronus Learning Networks, 5*(1), 35-57.

Goodwin, C. C. (2006). *Online learning as perceived by nontraditional adult learners*. Unpublished doctoral dissertation, University of Georgia, Athens.

Griffin, G. A. (1983). Introduction: The work of staff development. In G. A. Griffin (Ed.), *Staff development: Eighty-second yearbook of the National Society for the*

Study of Education (Vol. 82, Part II, pp. 1-12). Chicago: University of Chicago Press.

Guglielmino, L. M. (1977). *Development of an instrument to assess readiness for self-directed learning*. Unpublished doctoral dissertation, University of Georgia, Athens.

Gunawardena, C. N., & Duphorne, P. L. (2000). Predictors of learner satisfaction in an academic computer conference. *Distance Education, 21*(1), 101-117.

Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco: Jossey-Bass.

Guskey, T. R. (1986). Staff development and the process of teacher change. *Educational Researcher, 15*(5), 5-12.

Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.

Guskey, T. R. (2003). What makes professional development effective? *Phi Delta Kappan, 84*(10), 748.

Hara, N., & Kling, R. (2000). Student distress in a Web-based distance education course. *Information Communication & Society, 3*(4), 557-579.

Harmon, S. W., & Jones, M. G. (2001). An analysis of situated web-based instruction. *Educational Media International, 38*(4), 271-280.

Harasim, L. (2000). Shift happens: Online education as a new paradigm in learning. *Internet and Higher Education*, 3(1-2), 41-61.

Hase, S., & Ellis, S. (2001). Problems with online learning are systemic, not technical. In J. Stephenson (Ed.), *Teaching and learning online: Pedagogies for new technologies* (pp. 27-34). London: Kogan Page.

Hass, C. G. (1957). In-service education today. In N. B. Henry (Ed.), *In-service education for teachers, supervisors, and administrators: The fifty-sixth yearbook of the National Society for the Study of Education* (Vol. 56, Part I, pp. 13-34). Chicago: University of Chicago Press.

Hatton, N., & Smith, D. (1995). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education, 11*(1), 33-49.

Herrington, A., & Bunker, A. (2002). Quality teaching online: Putting pedagogy first. In A. Goody, J. Herrington & M. Northcote (Eds.), *Proceedings of the Annual International Conference of the Higher Education Research and Development Society of Australasia* (pp. 305-312), Perth, Australia. Retrieved from http://www.ecu.edu.au/conferences/herdsa/main/papers/ref/pdf/HerringtonA.pdf

Heuer, B. P., & King, K. P. (2004). Leading the band: The role of the instructor in online learning for educators. *Journal of Interactive Online Learning, 3*(1), 1-11.

Hislop, G. W., & Ellis, H. J. C. (2004). A study of faculty effort in online teaching. *Internet & Higher Education, 7*(1), 15-31.

Hodson, P., Connolly, M., & Saunders, D. (2001). Can computer-based learning support adult learners? *Journal of Further and Higher Education, 25*(3), 325-335.

Hofer, B. K. (2002). Personal epistemology as a psychological and educational construct: An introduction. In B. K. Hofer & P. R. Pintrich (Eds.), *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 3-14). Mahwah, NJ: Lawrence Erlbaum.

Holcombe, A. A. (2001). *Technology staff development: Facilitators and barriers to online learning.* Unpublished doctoral dissertation, The University of North Carolina, Greensboro.

Howland, J. L., & Moore, J. L. (2002). Student perceptions as distance learners in Internet-based courses. *Distance Education, 23*(2), 183-195.

Huang, H.-M. (2002). Toward constructivism for adult learners in online learning environments. *British Journal of Educational Technology, 33*(1), 27.

Jetton, T. (2004). Using computer-mediated discussion to facilitate preservice teachers' understanding of literacy assessment and instruction. *Journal of Research on Technology in Education, 36*(2), 171-191.

Johnson, C. G. (2005). Lessons learned from teaching web-based courses: The 7-year itch. *Nursing Forum, 40*(1), 11-17.

Johnson, S. D., & Aragon, S. R. (2003). An instructional strategy framework for online learning environments. *New Directions for Adult & Continuing Education*(100), 31-43.

Jonassen, D. H. (1991a). Evaluating constructivistic learning. *Educational Technology, 31*(9), 28-33.

Jonassen, D. H. (1991b). Objectivism versus constructivism: Do we need a new philosophical paradigm? *Educational Technology Research and Development, 39*(3), 5-14.

Joy, D. (2004). *Instructors transitioning to online education.* Unpublished Doctoral Dissertation, Virginia Polytechnic Institute and State University, Falls Church.

Kafai, Y. B., & Resnick, M. (1996). Introduction. In Y. B. Kafai & M. Resnick (Eds.), *Constructionism in practice: Designing, thinking, and learning in a digital world* (pp. 1-8). Mahwah, NJ: Lawrence Erlbaum.

Kagan, D. M. (1992). Implications of research on teacher beliefs. *Educational Psychologist, 27*(1), 65-90.

Kanuka, H., & Garrison, D. R. (2004). Cognitive presence in online learning. *Journal of Computing in Higher Education, 15*(2), 30-48.

Kasworm, C. E. (1983). An examination of self-directed contract learning as an instructional strategy. *Innovative Higher Education, 8*(1), 45-53.

Kasworm, C. E., & Yao, B. (1992, November 10). *The development of adult learner autonomy and self-directedness in distance education.* Paper presented at the World Conference of the International Council for Distance Education, Bangkok, Thailand. (ERIC Document Reproduction Service No. ED355453)

Keeton, M. T. (2004). Best online instructional practices: Report of Phase I of an ongoing study. *Journal of Asynchronous Learning Networks, 8*(2), 75-100.

Killion, J. (2000a). Log on to learn: To reap benefits of online staff development, ask the right questions. *Journal of Staff Development, 21*(3). Retrieved from http://www.nsdc.org/library/publications/jsd/killion213.cfm

Killion, J. (2000b). Online staff development: Promise or peril? *National Association of Secondary School Principals. NASSP Bulletin, 84*(618), 38-46.

King, K. P. (2002). Identifying success in online teacher education and professional development. *The Internet and Higher Education, 5*(3), 231-246.

King, K. P. (2005). *Bringing transformative learning to life*. Malabar, FL: Krieger Publishing.

Knowles, M. S. (1968). Andragogy not pedagogy! *Adult Leadership, 16*(10), 350-352, 386.

Knowles, M. S. (1970). *The modern practice of adult education: Andragogy versus pedagogy*. New York: Association Press.

Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. New York: Association Press.

Knowles, M. S. (1980a). Malcolm Knowles on . . . "How do you get people to be self-directed learners?" *Training & Development Journal, 34*(5), 96-99.

Knowles, M. S. (1980b). *The modern practice of adult education : From pedagogy to andragogy* (Rev. and Updated ed.). Chicago: Association Press.

Knowles, M. S. (1984a). *The adult learner: A neglected species* (3rd ed.). Houston: Gulf Publishing.

Knowles, M. S. (1984b). Introduction: The art and science of helping adults learn. In M. S. Knowles (Ed.), *Andragogy in action: Applying modern principles of adult learning* (pp. 1-21). San Francisco: Jossey-Bass.

Kochtanek, T. R., & Hein, K. K. (2000). Creating and nurturing distributed asynchronous learning environments. *Online Information Review, 24*(4), 280-293.

Learn. (n.d.) In Merriam-Webster's online dictionary. Retrieved February 26, 2006, from http://merriamwebster.com/

Lee, J., & Gibson, C. C. (2003). Developing self-direction in an online course through computer-mediated interaction. *American Journal of Distance Education, 17*(3), 173-187.

Lewis, C. C., & Abdul-Hamid, H. (2006). Implementing effective online teaching practices: Voices of exemplary faculty. *Innovative Higher Education, 31*(2), 83-98.

Lin, S., & Overbaugh, R. C. (2007). The effect of student choice of online discussion format on tiered achievement and student satisfaction. *Journal of Research on Technology in Education, 39*(4), 399-415.

Lindeman, E. C. (1926). *The meaning of adult education*. New York: New Republic.

Lord, G., & Lomicka, L. (2007). Foreign language teacher preparation and asynchronous CMC: Promoting reflective teaching. *Journal of Technology and Teacher Education, 15*(4), 513-532.

Loucks-Horsley, S. (1995). Professional development and the learner centered school. *Theory into Practice, 34*(4), 265-271.

Louridas, P. (1999). Design as bricolage: Anthropology meets design thinking. *Design Studies, 20*(6), 517-535.

Mannan, S. J. (2003). *A different place: Student learning in an online course.* Unpublished doctoral dissertation, Indiana State University, Terra Haute.

Many, J. E., Wallace, F. H., Stephenson, J., & Eickholdt, L. (2004). I know them better than students in my on-campus courses: Exploring a personalized approach to

online instruction. *Reading Online, 8*(2). Retrieved from http://www.readingonline.org/articles/art_index.asp?HREF=many/index.html

Maor, D. (2003). The teacher's role in developing interaction and reflection in an online learning community. *Educational Media International, 40*(1/2), 127-137.

Maor, D., & Volet, S. (2007). Engagement in professional online learning: A situative analysis of media professionals who did not make it. *International Journal on E-Learning, 6*(1), 95-117.

Maor, D., & Zariski, A. (2003). Is there a fit between pedagogy and technology in online learning? In A. Bunker & M. O'Sullivan (Eds.), *12th Teaching and Learning Forum*. Perth, Western Australia: Edith Cowan University. Retrieved from http://www.ecu.edu.au/conferences/tlf/2003/pub/pdf/18_Maor_DoritZariski_Archie.pdf

Maurino, P. S. M. (2007). Online asynchronous threaded discussions: Good enough to advance students through the proximal zone of Activity Theory? *TechTrends, 51*(2), 46-49.

McInnerney, J. M., & Roberts, T. S. (2004). Online learning: Social interaction and the creation of a sense of community. *Educational Technology & Society, 7*(3), 73-81.

McIsaac, M. S., Blocher, J. M., Mahes, V., & Vrasidas, C. (1999). Student and teacher perceptions of interaction in online computer-mediated communication. *Educational Media International, 36*(2), 121-131.

McManis, J. T. (1903). Problems of the institute. *The Elementary School Teacher*, *4*(4), 232-239.

McMillan, D. W. (1996). Sense of community. *Journal of Community Psychology, 24*(4), 315-325.

Merriam, S. B. (1998). *Qualitative research and case study applications in education* (2nd ed.). San Francisco: Jossey-Bass.

Merriam, S. B. (2001, Spring). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult & Continuing Education, 89*, 3-14.

Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis* (1st ed.). San Francisco: Jossey-Bass.

Merriam, S. B. (2005). How adult life transitions foster learning and development. *New Directions for Adult and Continuing Education,* 108, 3-13.

Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide*. San Francisco: Jossey-Bass.

Mezirow, J. (1996). Toward a learning theory of adult literacy. *Adult Basic Education*, 6(3), 115-126.

Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformation theory. In J. Mezirow (Ed.), *Learning as transformation: Critical perspectives on a theory in progress* (pp. 3-33). San Francisco: Jossey-Bass.

Mills, G. E. (2000). *Action research: A guide for the teacher researcher*. Upper Saddle River, NJ: Merrill.

Moffitt, J. C. (1963). *In-service education for teachers*. Washington: Center for Applied Research in Education.

Morris, L. V., Xu, H., & Finnegan, C. L. (2005). Roles of faculty in teaching asynchronous undergraduate courses. *Journal of Asynchronous Learning Networks, 9*(1), 65-82.

Morrone, A. S., & Tarr, T. A. (2005). Theoretical eclecticism in the college classroom. *Innovative Higher Education, 30*(1), 7-21.

Motteram, G., & Forrester, G. (2005). Becoming an online distance learner: What can be learned from students' experiences of induction to distance programmes? *Distance Education, 26*(3), 281-298.

Mykota, D., & Duncan, R. (2007). Learner characteristics as predictors of online social presence. *Canadian Journal of Education, 30*(1), 157-170.

Naidu, S. (2008). Enabling time, place, and place independence. In J. M. Spector, M. D. Merrill, J. Van Merriënboer & M. P. Driscoll (Eds.), *Handbook of research on educational communications and technology* (3rd ed., pp. 259-268). New York: Lawrence Erlbaum.

National Education Association. (2000). *A survey of traditional and distance learning higher education members*. Washington, DC: National Education Association.

National Staff Development Council & National Institute for Community Innovations. (2001). *E-learning for educators: Implementing the standards for staff development*. Oxford, Ohio.

National Staff Development Council. (2001). *National Staff Development Council's standards for staff development* (Rev. ed.). Oxford, Ohio: National Staff Development Council.

National Staff Development Council. (2007). What is staff development? Retrieved September 22, 2007, from http://www.nsdc.org/library/basics/whatisSD.cfm

Nkonge, B. I. N. (2004). *Pedagogical beliefs, perceptions, and practices of faculty in Web-based instruction: A multiple case study.* Unpublished doctoral dissertation, University of North Carolina at Greensboro.

Northrup, P. T. (2002). Online learner's preferences for interaction. *Quarterly Review of Distance Education, 3*(2), 219-226.

Ozuah, P. O. (2005). First, there was pedagogy and then came andragogy. *The Einstein Journal of Biology and Medicine, 21*(2), 83-87.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*(3), 307-332.

Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass.

Palloff, R. M., & Pratt, K. (2000, October 10-13). Making the transition: Helping teachers to teach online. Proceedings of the EDUCAUSE 2000: Thinking IT Through, Nashville, TN. Retrieved from hhttp://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED452797

Palloff, R. M., & Pratt, K. (2001). *Lessons from the cyberspace classroom: The realities of online teaching*. San Francisco: Jossey-Bass.

Palloff, R. M., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners* (1st ed.). San Francisco: Jossey-Bass.

Porter, A. C., Garet, M. S., Desimone, L., Yoon, K. S., & Birman, B. F. (2000). Does professional development change teaching practice? Results from a three-year study (ED Pub. No. 2000-04). U.S. District of Columbia: U.S. Department of Education. (ERIC Document Reproduction Service No. ED455227)

Rachal, J. R. (2002). Andragogy's detectives: A critique of the present and a proposal for the future. *Adult Education Quarterly, 52*(3), 210-227.

Reeves, T., Herrington, J., & Oliver, R. (2002). Authentic activities and online learning. In A. Goody, J. Herrington & M. Northcote (Eds.), *Proceedings of the Annual International Conference of the Higher Education Research and Development Society of Australasia* (pp. 562-567), Perth, Australia. Retrieved from http://www.ecu.edu.au/conferences/herdsa/main/papers/ref/pdf/Reeves.pdf

Reinheimer, D. A. (2005). Teaching composition online: Whose side is time on? *Computers and Composition, 22*(4), 459-470.

Richardson, V. (2003). The dilemmas of professional development. *Phi Delta Kappan, 84*(5), 401-406.

Richardson, V., Anders, P., Tidwell, D., & Lloyd, C. (1991). The relationship between teachers' beliefs and practices in reading comprehension instruction. *American Educational Research Journal, 28*(3), 559-586.

Richey, H. G. (1957). Growth of the modern conception of in-service education. In N. B. Henry (Ed.), *In-service education for teachers, supervisors, and administrators: The fifty-sixth yearbook of the National Society for the Study of Education* (Vol. 56, Part I, pp. 35-66). Chicago: University of Chicago Press.

Ross, J. A. (1996, April 8-12). Computer communication skills and participation in a computer-mediated conferencing course. Paper presented at the Annual Meeting of the American Educational Research Association, New York. (ERIC Document Reproduction Service No. ED395565)

Ryan, M., Hodson-Carlton, K., & Ali, N. S. (2005). A model for faculty teaching online: Confirmation of a dimensional matrix. *Journal of Nursing Education*, *44*(8), 357-365.

Salmon, G. (2000). *E-moderating: The key to teaching and learning online*. London: Kogan Page.

Salmon, G. (2002). Mirror, mirror, on my screen . . . Exploring online reflections. *British Journal of Educational Technology, 33*(4), 379-391.

Sargent, A. G., & Schlossberg, N. K. (1988). Managing adult transitions. *Training & Development Journal, 42*(12), 58-60.

Schlager, M. S., & Fusco, J. (2003). Teacher professional development, technology, and communities of practice: Are we putting the cart before the horse? *Information Society, 19*(3), 203-220.

Schrum, L., Burbank, M. D., Engle, J., Chambers, J. A., & Glassett, K. F. (2005). Post-secondary educators' professional development: Investigation of an online approach to enhancing teaching and learning. *The Internet and Higher Education, 8*(4), 279-289.

Schrum, L., & Hong, S. (2002). Dimensions and strategies for online success: Voices from experienced educators. *Journal of Asynchronous Learning Networks, 6*(1), 57-67.

Schulte, A. (2003). Discussions in cyberspace: Promoting interactivity in an asynchronous sociology course. *Innovative Higher Education, 28*(2), 107-118.

Schunk, D. H. (1996). *Learning theories: An educational perspective* (2nd ed.). Englewood Cliffs, NJ: Merrill.

Schunk, D. H. (2004). *Learning theories: An educational perspective* (4th ed.). Upper Saddle River, NJ: Pearson.

Seidman, I. (2006). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (3rd ed.). New York: Teachers College Press.

Sellers, R. G. (2001). *Learning to teach in a virtual environment: A case study of the Louisiana Virtual Classroom teachers.* Unpublished doctoral dissertation, Louisiana State University and Agricultural & Mechanical College, Baton Rouge.

Shuell, T. J. (1986). Cognitive conceptions of learning. *Review of Educational Research, 56*(4), 411-436.

Siedlaczek, K. (2004). Perceptions about teaching online versus in a classroom environment. *College Quarterly, 7*(3). Retrieved from http://www.collegequarterly.ca/2004-vol07-num03-summer/siedlaczek.html

Smith, G. G., Ferguson, D., & Caris, M. (2002). Teaching over the Web versus in the classroom: Differences in the instructor experience. *International Journal of Instructional Media, 29*(1), 61-67.

Smith, P. L., & Ragan, T. J. (1993). *Instructional design*. Toronto: Merrill.

Smylie, M. A., Allensworth, E., Greenberg, R. C., Harris, R., & Luppescu, S. (2001). *Teacher professional development in Chicago: Supporting effective practice*.

Chicago: Consortium on Chicago School Research. Retrieved from http://ccsr.uchicago.edu/publications/p0d01.pdf

Snelbecker, G. E. (1987). Contrasting and complementary approaches to instructional design. In C. M. Reigeluth (Ed.), *Instructional theories in action: Lessons illustrating theories and models* (pp. 321-337). Hillsdale, NJ: Erlbaum.

Song, L. (2005). *Self-directed learning in online environments process, personal attribute, and context.* Unpublished doctoral dissertation, University of Georgia, Athens.

Sparks, D. (1994). A paradigm shift in staff development. *Journal of Staff Development, 15*(4). Retrieved from http://www.nsdc.org/library/publications/jsd/sparks154.cfm?printPage=1&

Sparks, D., & Hirsh, S. (1997). *A new vision for staff development*. Alexandria, VA: Oxford, Ohio: Association for Supervision and Curriculum Development; National Staff Development Council.

Sparks, D., & Loucks-Horsley, S. (1989). Five models of staff development for teachers. *Journal of Staff Development, 10*(4), 40-57.

Spradley, J. P. (1979). *The ethnographic interview*. Fort Worth, TX: Harcourt Brace Jovanovich.

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks: Sage.

Svinicki, M. D. (1999). New directions in learning and motivation. *New Directions for Teaching & Learning, 80*, 5-27.

Swan, K. (2002). Building learning communities in online courses: The importance of interaction. *Education, Communication & Information*, 2(1), 23-49.

Thompson, E. W., & Savenye, W. C. (2007). Adult learner participation in an online degree program: A program-level study of voluntary computer-mediated communication. *Distance Education, 28*(3), 299-312.

Tomei, D. L. (2006). The impact of online teaching on faculty load: Computing the ideal class size for online courses. *Journal of Technology and Teacher Education, 14*(3), 531-541.

Vincent, A., & Shepherd, J. (1998). Experiences in teaching Middle East politics via Internet-based role-play simulations. *Journal of Interactive Media in Education, 98*(11), 1-35.

Vonderwell, S. (2003). An examination of asynchronous communication experiences and perspectives of students in an online course: A case study. *Internet & Higher Education, 6*(1), 77-90.

Vonderwell, S., & Turner, S. (2005). Active learning and preservice teachers' experiences in an online course: A case study. *Journal of Technology and Teacher Education, 13*(1), 65-84.

Whipp, J. L. (2003). Scaffolding critical reflection in online discussions: Helping prospective teachers think deeply about field experiences in urban schools. *Journal of Teacher Education, 54*(4), 321-333.

Wilson, D., Varnhagen, S., Krupa, E., Kasprzak, S., Hunting, V., & Taylor, A. (2003). Instructors' adaptation to online graduate education in health promotion: A qualitative study. *Journal of Distance Education, 18*(2), 1-15.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks: Sage.

Zinn, L. M. (2004). Exploring your philosophical orientation. In M. W. Galbraith (Ed.), *Adult learning methods: A guide for effective instruction* (3rd ed., pp. 39-74). Malabar, FL: Krieger.

Zumbach, J., Reimann, P., & Koch, S. C. (2006). Monitoring students' collaboration in computer-mediated collaborative problem-solving: Applied feedback approaches. *Journal of Educational Computing Research, 35*(4), 399-424.

APPENDIXES

APPENDIX A

Research Permission Letter

April 28, 2006

Ms. Kathi Vanderbilt
161 Hickory Lake Drive
Acworth, GA 30101

Dear Ms. Vanderbilt,

Your research project has been approved. Please work with [redacted] to obtain a list of experienced instructors teaching online professional development and to coordinate the administration of any participant instruments or conduct interviews.

Should modifications or changes in research procedures become necessary during the research project, changes must be submitted in writing to the Office of Accountability prior to implementation. At the conclusion of your research project, you are expected to submit a copy of your results to this office. Research files are not considered complete until results are received. If you have any questions regarding the process, contact [redacted] at [redacted].

Sincerely,

[redacted]

[redacted]

Assistant Superintendent
Office of Accountability
King County School District (a pseudonym)

APPENDIX B

INSTITUTIONAL REVIEW BOARD

Mail: P.O. Box 3999
Atlanta, Georgia 30302-3999

In Person: Alumni Hall
30 Courtland St, Suite 217

Phone: 404/463-0674
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June 22, 2006

Principal Investigator: Shoffner, Mary B

Student PI: Kathi Vanderbilt

Protocol Department: Middle Secondary Education & Instructional Technology

Protocol Title: Online Professional Development: An Analysis of Instructors? Beliefs and Instructional Strategies for the Facilitation of Learning with Adult Educators

Submission Type: Protocol H06411

Review Type: Expedited Review

Approval Date: June 21, 2006

Expiration Date: June 20, 2007

The Georgia State University Institutional Review Board (IRB) reviewed and approved the above referenced study and enclosed Informed Consent Document(s) in accordance with the Department of Health and Human Services. The approval period is listed above.

Federal regulations require researchers to follow specific procedures in a timely manner. For the protection of all concerned, the IRB calls your attention to the following obligations that you have as Principal Investigator of this study.

1. When the study is completed, a Study Closure Report must be submitted to the IRB.

2. For any research that is conducted beyond the one-year approval period, you must submit a Renewal Application 30 days prior to the approval period expiration. As a courtesy, an email reminder is sent to the Principal Investigator approximately two months prior to the expiration of the study. However, failure to receive an email reminder does not negate your responsibility to submit a Renewal Application. In addition, failure to return the Renewal Application by its due date must result in an automatic termination of this study. Reinstatement can only be granted following resubmission of the study to the IRB.

3. Any adverse event or problem occurring as a result of participation in this study must be reported immediately to the IRB using the Adverse Event Form.

4. Principal investigators are responsible for ensuring that informed consent is obtained and that no human subject will be involved in the research prior to obtaining informed consent. Ensure that each person signing the written informed consent form (ICF) is given a copy of the ICF. The ICF used must be the one reviewed and approved by the IRB; the approval dates of the IRB review are stamped on each page of the ICF. Copy and use the stamped ICF for the coming year. Maintain a single copy of the approved ICF in your files for this study.

All of the above referenced forms are available online at https://irbwise.gsu.edu. Please do not hesitate to contact Susan Vogtner in the Office of Research Integrity (404-463-0674) if you have any questions or concerns.

Sincerely,

Ann C. Kruger, IRB Chair

Appendix C

First Invitation to Participate in Study

Date_____

Dear _____,

My name is Kathi Vanderbilt and I work at [redacted] as a library media specialist. I am currently working on my PhD at Georgia State University (GSU) and am interested in learning more about online instruction with adult learners. As a result I would like to conduct a study about online professional development.

In order to conduct the study I need volunteers. If you are an experienced instructor it is likely that you can participate in this study. For the purpose of this study an experienced instructor will be defined as an instructor who has taught the same professional development course on at least one previous occasion.

The purpose of this study is to explore instructor's beliefs about instructional strategies used to facilitate online learning with adults. Additionally the study will examine the instructor's beliefs about the way that adults learn and beliefs about creating online learning environments for adult learners. It is hoped that this study will provide suggestions for the successful facilitation of online learning with adults and a better understanding of online learning environments that are conducive to adult learning.

If you are interested in participating or would like more information please contact me.

Kathi Vanderbilt
161 Hickory Lake Drive
Acworth, GA 30101
Home: [redacted]
Email: kvanderbilt1@gsu.edu

APPENDIX D

Thank You Note

Date_____,

Dear _____,

Thank you for your interest in my study on instructors' beliefs about instructional strategies used to facilitate online learning with adults. I have attached a copy of the informed consent form. If you would like to participate in the study please complete and return the informed consent form. You may send the form in the attached self-addressed stamped envelope provided. Once the form is received I will make a copy of it and mail it back to you. If you have any questions about the study please contact me. You may also contact my advisor Mary Shoffner.

Researcher	Faculty Advisor
Kathi L. Vanderbilt	Dr. Mary B. Shoffner
161 Hickory Lake Drive Acworth, GA 30101	Middle Secondary Instructional Technology Department Georgia State University
770-437-5900, ext. 232 (Work) [redacted] (Home)	404-651-0209
kvanderbilt1@student.gsu.edu	mshoffner@gsu.edu

APPENDIX E

Second Request for Participation

Date_____

Dear_____,

It's not too late to participate in a research study about online instruction. I recently mailed you an invitation to participate in a study that I am conducting as part of the requirements for completing my doctorate in instructional technology at Georgia State University. If you are an experienced instructor teaching a course for online professional development during the Summer of 2006 you may be able to participate in the study. For the purpose of this study an experienced instructor will be defined as an instructor who has taught the same professional development course on at least one previous occasion.

The purpose of this study is to explore instructor's beliefs about instructional strategies used to facilitate online learning with adults. Additionally the study will examine the instructor's beliefs about the way that adults learn and beliefs about creating online learning environments for adult learners. It is hoped that this study will provide suggestions for the successful facilitation of online learning with adults and a better understanding of online learning environments that are conducive to adult learning.

In order to conduct the study I need volunteers. If you are an experienced instructor it is likely that you can participate in this study.

If you are interested in participating or would like more information please contact me.
Thank you for your thoughtful consideration,

Kathi Vanderbilt
161 Hickory Lake Drive
Acworth, GA 30101
Home: [redacted]
Email: kvanderbilt1@gsu.edu

APPENDIX F

Georgia State University
Department of Middle Secondary Instructional Technology

Consent Form
to Allow Audio Taping

Title: Online Professional Development: An Analysis of Instructors' Beliefs About Instructional Strategies for the Facilitation of Learning with Adult Educators

Principal Investigator: Kathi L. Vanderbilt

Confidentiality: Your records will be kept private. A pseudonym will be used on all records. Your name will not appear in any presentation or publication. Study findings will be summarized and you will not be identified personally.

I agree to allow an audio recording to be made of the _____ face-to-face interviews. The audio tapes will destroyed by August 30, 2007.

Please sign and date this statement.

Name (printed): _____

Signature: _____ Date: _____

Principal Investigator (Researcher)	**Faculty Advisor**
Kathi L. Vanderbilt	Dr. Mary B. Shoffner
[redacted] (Home)	404-651-0209
kvanderbilt1@student.gsu.edu	mshoffner@gsu.edu
If you have questions or concerns about your rights as a participant in this research study, please contact Susan Vogtner. Ms. Vogtner works in the office of research compliance at Georgia State University. Her telephone number is 404-463-0674 and her email address is svogtner1@gsu.edu	

APPENDIX G

Georgia State University
Department of Middle Secondary Instructional Technology

Consent Form to
Allow Digital Text Recording

Title: Online Professional Development: An Analysis of Instructors' Beliefs About Instructional Strategies for the Facilitation of Learning with Adult Educators

Principal Investigator: Kathi L. Vanderbilt

Confidentiality: Your records will be kept private. A pseudonym will be used on all records. Your name will not appear in any presentation or publication. Study findings will be summarized and you will not be identified personally.

I agree to allow a digital text recording to be made of the online interview conducted via the chat tool.

Please sign and date this statement.

Name (printed): _____

Signature: _____

Date: _____

Principal Investigator (Researcher)	**Faculty Advisor**
Kathi L. Vanderbilt	Dr. Mary B. Shoffner
[redacted] (Home)	404-651-0209
kvanderbilt1@student.gsu.edu	mshoffner@gsu.edu
If you have questions or concerns about your rights as a participant in this research study, please contact Susan Vogtner. Ms. Vogtner works in the office of research compliance at Georgia State University. Her telephone number is 404-463-0674 and her email address is svogtner1@gsu.edu	

APPENDIX H

Interview Protocol

Interview 1: Establishing the context

1. How did you become an online professional development instructor?
2. Describe your history as a professional development instructor.
3. What other experiences have you had as an instructor?
4. Describe any personal experiences you may have had as an online learner.
5. What is effective instruction? (use effective instruction card sort in Appendix F).
6. What is learning? (use learning is card sort Appendix F)
7. What do you want course participants to learn in your online course?
8. Why is what you think participants should learn important?
9. What might be difficult for participants to learn what you think is important?
10. How do course participants go about learning your content?
11. How do course participants differ in their approach to learning your content?
12. What problems do course participants have learning your content?
13. Why do you think course participants have problems learning your content?
14. How do you know when your course participants are successful at learning?
15. What is a good indicator that course participants have learned the essential aspects of your content?
16. What distinguishes differing levels of achievement among participants in your course?

(Pratt, 1998, p. 206)

Interview 2: Reconstructing the Experience

1. Can you describe one of your online teaching experiences?
2. What impact did this experience have on the learner or learners in your course?
3. Suppose you were enrolled in the course that you are currently teaching… what instructional strategies might help you the most?
4. Describe the “perfect” adult online learner.
    a. Describe the “typical” adult online learner
    b. How can an OPD instructor challenge the "typical" students to moving toward becoming "perfect" adult online learners?
5. What do learners bring to the learning situation that might influence their learning or your teaching?

6. Take me on a tour of what it is like to be in the online environment you create for your students.

Interview 3: Reflection on Meaning

1. What instructional strategy have you found to be effective? (Use instructional strategy cards in Appendix I to prompt discussion) Also use prompts below if needed.
    a. Describe the ways that learners interacted with the content as a result of this strategy.
    b. Describe the ways that learners interacted with their peers as a result of this strategy.
    c. Describe the ways that learners interacted with the instructor as a result of this strategy.
2. How has learning occurred in your course?
3. What has worked well for learners?
4. What have learners had difficulty with?
5. Discuss one instructional strategy that you may use the next time you teach the course?
6. Take me on a tour of the perfect online professional development course for adult learners.

Pratt, D. D. (1998). Five perspectives on teaching in adult and higher education (Original ed.). Malabar, FL: Krieger.

APPENDIX I

Card Sort Information for interviews

Effective instruction card sort:

Effective instruction… requires a substantial commitment to the content or subject matter. The instructor's primary responsibility is to present the content accurately and efficiently. It is the learner's responsibility to learn the content.

Effective instruction… Is a process of socializing learners into new behaviors and ways of working. As a highly skilled practitioner, the instructor's primary responsibility is to know the capabilities of the learners on their own and with the support of the instructor. The instructor provides support for the learner within their zone of development.

Effective instruction… must be planned and conducted "from the learner's point of view." Instructors need to know how learners think and reason about the content. The instructor's primary responsibility is to help learners develop cognitive structures to comprehend the content.

Effective instruction… assumes that long-term, persistent effort to achieve comes from the heart, not the head. The instructor's primary responsibility is to nurture the learner's understanding that they can be successful through their own effort and abilities. Good instructors challenge learners to do their best, provide clear instructions, reasonable goals, and a supportive learning environment.

Effective instruction… seeks to change society in substantive ways. The instructor's primary responsibility is to challenge the status quo by making learners aware of the values and ideologies that are in content and practice. Learners are encouraged to take critical stances to give them power to take social action to improve their own lives and the lives of others.

Pratt, D. D., & Collins, J. B. (2001). Summaries of five teaching perspectives. from http://teachingperspectives.com/PDF/summaries.PDF

Learning card sort

Learning…

- Is a change in personal meaning constructed from experience
- Occurs when the learner builds personal meaning based on experiences and interaction
- Is an active process
- Involves interaction among learners, peers, instructor, and content through authentic tasks in meaningful contexts

The instructor is a guide and facilitator who:

- Uses techniques to assess learners' prior content knowledge and locate gaps and misconceptions
- Provides multiple representation and opportunities to consider diverse perspectives

Learning…

- Is a change in behavior
- Occurs in a highly structured environment
- Is a passive process
- Involves the presentation of content that results in observable and measurable behaviors

The instructor is an expert who:

- Analyzes target behaviors and organizes instruction into small, discrete logically sequenced steps
- Provides direct instruction

Learning…

- Is a change in knowledge stored in memory.
- Is assisted when information is structured and organized in ways to help the learner process it
- Is an active process but knowledge exists outside of the learner
- Involves organizing new concepts to link to existing knowledge and to gain learner attention and support the encoding and retrieval of information

The instructor emphasizes mental activities and...

- Encourages learners to think about their learning processes – metacognition
- Uses problem solving approaches to learning to help the learner apply concepts in new settings

Instructional strategies card sort:

- Instructional cues to prompt correct response
- Practice and reinforcement
- Drill and practice
- Discrimination, Recalling facts
- Matched non-examples
- Corrective feedback
- Outlining
- Mnemonics
- Chunking information
- Advance organizers, Graphic organizers
- Metaphors, Analogies, Forced associations
- Summaries
- Links to prior knowledge
- Modeling
- Collaborative learning
- Coaching
- Scaffolding
- Fading
- Problem-based learning, inquiry learning
- Simulations
- Role play
- Icebreaker
- Groupings, Dyads, Partners, Teams
- Games
- Discussion roles, Leader, Summarizer
- Debate, Mock trial, Examining both sides of an argument
- Group project
- Contests
- Aha moment
- Sharing critical insight
- “I didn’t know that”
- Case study, Case-based reasoning, Problem vignettes
- Celebrity chat
- Virtual field trip
- WebQuest
- Learner-led activity
- Brainstorming, Reverse brainstorming
- Tall tales or story starters
- What if…, just suppose, Rearrange the facts
- Diaries, Journals, Free writing
- Concept mapping, Chaining, Free association

- Voting, ranking
- Pros and cons, Pluses and minuses
- Minute papers, Reflection papers, Think sheets, Guided questions
- Summing it up, abstracts, reviews
- Compare and contrast
- Partner activities, share-check work-review, discuss, think-pair-share
- Synchronous conferencing
- Asynchronous conferencing

APPENDIX J

Georgia State University
Department of Middle Secondary Instructional Technology

Informed Consent Form

Title: Online Professional Development: An Analysis of Instructors' Beliefs About Instructional Strategies for the Facilitation of Learning with Adult Educators

Principal Investigator: Dr. Mary B. Shoffner
Student Investigator: Kathi L. Vanderbilt

Sponsor: None

I. Introduction/Background/Purpose: You are being asked to volunteer to participate in a research study. Kathi L. Vanderbilt will conduct the study as a requirement for the completion of the doctoral program at Georgia State University (GSU). GSU has a policy to protect human research subjects. This policy asks for signed agreement to participate in the study. The purpose of this study is to examine instructors' beliefs about the facilitation of learning with adults in online professional development courses. It is hoped that this study will contribute to the body of knowledge about online instruction with adults and online environments for adult learning.

Involvement in the project will include: Participation in two ninety minute face-to-face interviews.

- Participation in one sixty minute online interview.
- Communication with the researcher in person and online through a variety of formats: email, telephone and online chat.
- Keeping an online instructor journal to record ideas about the online teaching process, for example how online teaching challenges are handled, what kind of instructional strategies are used, and what is effective and what is not.

II. Procedures: Research will be conducted online, by email and/or telephone, and in two face-to-face interviews and one online interview via text chat. Participants may choose one of the following locations for the interview: a public school, public library, or another public location. With participant permission, the interviews will be audio taped for transcription purposes. The audio tapes will destroyed by August 30, 2007

III. Risks: There should be little risk of injury to participants beyond what is normally experienced in a classroom setting.

IV: Benefits: It is hoped that this study will provide suggestions for the successful facilitation of online instruction and learning with adults and a better understanding of online learning environments that are conducive to adult learning.

V. Voluntary Participation and Withdrawal: Participation in this research study is voluntary. You have the right to refuse to participate. If you participate in the study, you can change your mind and drop out at any time. However, any information already used to the point when you withdraw consent will not be removed. Whatever you decide, you will not lose any benefits to which you are otherwise entitled. Your status as an online instructor will not be affected by participation or non-participation in the study. Participation or non-participation in this study will not have any affect on any job related or staff evaluation.

VI: Confidentiality: Your records will be kept private. A pseudonym will be used on all records. Your name will not appear in any presentation or publication. Study findings will be summarized and you will not be identified personally.

If you agree to participate at this time, please sign and date this statement.

You will be given a copy of this consent form. Thank you for participating.

Name (printed): _____

E-Mail Address (Outside of the school district) _____

Home Telephone number & best time to reach you _____

Signature: _____
Date: _____

Researcher Obtaining Consent_____
Date: _____
(Principal Investigator or Student Principal Investigator)
Address to have a copy of form mailed to:
_____

_____

Principal Investigator (Researcher)	**Faculty Advisor**
Kathi L. Vanderbilt	Dr. Mary B. Shoffner
[redacted] (Home)	404-651-0209
kvanderbilt1@student.gsu.edu	mshoffner@gsu.edu
If you have questions or concerns about your rights as a participant in this research study, please contact Susan Vogtner. Ms. Vogtner works in the office of research compliance at Georgia State University. Her telephone number is 404-463-0674 and her email address is svogtner1@gsu.edu	