

**EXPERIENCE, ADOPTION, AND TECHNOLOGY: EXPLORING THE
PHENOMENOLOGICAL EXPERIENCES OF FACULTY INVOLVED IN
ONLINE TEACHING AT ONE SCHOOL OF PUBLIC HEALTH**

A Dissertation

by

TERRY T. KIDD

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2011

Major Subject: Curriculum & Instruction

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May 2011

Major Subject: Curriculum & Instruction

ABSTRACT

Experience, Adoption, and Technology: Exploring the Phenomenological Experiences of Faculty Involved in Online Teaching at One School of Public Health. (May 2011)

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This phenomenological study explored the experiences of public health faculty, who developed and taught online courses, at one particular school of public health from 2006 to 2009. The goal was to explore and document the experiences of faculty involved with this phenomenon. A criterion sample was used to identify and select participants. Five public health faculty participated in the study. Data were analyzed in two ways. Written narratives, observational field notes, and artifact data were analyzed using the inducted grounded analysis technique. Interview data were analyzed using the phenomenological data analysis method, Stevic-Colazzi Keen Method.

Findings revealed that the experiences of public health faculty, who develop and teach online courses were similar to those in other subjects and were described as difficult, daunting, painful, and time consuming, leaving the public health faculty feeling frustrated and exhausted. While negative feelings described the experience pertaining to the development of online courses, the experience in the teaching phase was seen as

positive, enjoyable, joyful, refreshing, and fun. These experiences were found to be contingent upon instructional and organizational support, availability and quality of resources and faculty development and training.

Three overarching themes emerged from the study in relation to the experience. These themes included the rhetoric of fear, transformation, and support. The rhetoric of fear described the participants' sense of being afraid or apprehensive toward developing and teaching online courses. Transformation described the transition participants made as they emerged as online instructors. Support described the structures needed to engage in the activities of developing and teaching online courses.

The study also revealed five types of barriers to developing and teaching online courses at this particular school of public health. These barriers included psychological, organizational, technical, instructional, and time barriers. Benefits for developing and teaching online courses were identified. They included availability for students, access and penetration into global markets, instructional innovation, design innovation, and new methods of instructional delivery.

This study provides data that can be used by institutions and faculty as they design and implement social, political, and technical infrastructures to support the activities of online teaching.

DEDICATION

I would like to dedicate this dissertation to my nephew, who is a glimmer of hope as to what the future may bring. I expect great things from you. I would also like to dedicate this dissertation to my great grandmother, Jewel Mildred Pennilton, who was born at the turn of the last century, struck out on faith and came to Texas, not knowing the struggles and rewards she would find. Her journey set in motion my success. Lastly, to my ancestors who were silenced and never saw freedom, this is dedicated to you.

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A wise king once said: “And further by these my son, be admonished, of making many books, there is no end; and much study is a weariness of the flesh.” As I embarked on this journey, the words of that wise king, King Solomon, resonate with me. I had no idea of the struggles and complications I would have to endure. However, as Paul said: “It was all for my making.” This dissertation experience has been an interesting teachable moment. I have learned many aspects about life, including lessons of faith, hope, sacrifice, and endurance. These four virtues will continue to influence me both professionally and personally. As I discovered, when life gives you lemons, not only do you make a lemon cake, you also make lemonade. With these sediments, I am blessed beyond measure and am thankful to all who made this dream possible. While at times I became weary in the process, several have inspired me along the way. I would be remiss not to acknowledge those who were instrumental in my success and encouraged me along the way.

First and foremost, I offer praise to God and to Jesus Christ for being a beacon of hope, light, and strength, when everything else failed. Secondly, I would like to express my gratitude to the five participants in this study. Without them, this opportunity would never have been made a reality. I would like to thank Dr. Gene Schroder, Dr. Sharon Copper, Dr. Irene Cech, Dr. Steve Kelder, and Dr. George Delclos for allowing me the opportunity to practice my craft at the University of Texas School of Public Health.

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I would also like to thank my well assembled committee for a job well done; giving deference first to my committee chairpersons, Dr. Trina Davis and Dr. Patricia Larke. Dr. Trina Davis served as an advisor from my earliest days in the doctoral program. Throughout the years, she has encouraged me to take care of my health. As my

dissertation project unfolded, Dr. Davis showed great hospitality by holding meeting at her home and at times serving wonderfully prepared and savory dishes. Dr. Patricia Larke has supported me and my doctoral research efforts. Thank you for taking the time to work with me and for being an advocate. I know at times it was rough; however, you stuck with me until the end. May the heavens continue to bless and smile on you.

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I wish to thank Dr. B. Stephen Carpenter, II for opening my eyes to qualitative research and for being a huge supporter of my research interests. Thank you for calling me out in class to challenge my assumptions. I look forward to our continued friendship and collaborations in the future.

In addition, I wish to thank Dr. Carol Stuessy and Dr. Jean Madsen for their encouragement and comedic relief while at Texas A&M. Lastly, I wish to thank Dr. Laverne Young-Hawkins for being an advocate and for fighting for me to be admitted into the program. Now the rest is history. Thank you for this opportunity.

A special note of thanks goes to Dr. Morris Jenkins, Jr., Pastor of the Ellis Memorial Church of God in Christ and his wife, Mrs. Marsha Jenkins. Keep letting God use you for great things. Thank you for your support throughout the doctoral process. To my mother, thank you for supporting my work. To my sister and nephew, love you much. Finally, to Professor Wang JuRong and Dr. Wu Chengde, thank you gracing the path of my life with your knowledge and wisdom. You will always be remembered.

In closing, I am reminded of four quotes that speak to different aspects of my life's journey. Dr. Martin Luther King, Jr. said "*The function of education is to teach one to think intensively and to think critically. Intelligence plus character – that is the goal of true education.*" This process has helped to change my character and my ability to critically think. Secondly, I endeavor to uphold the words of Foucault, as I continue the work of an intellectual. "*The work of an intellectual is not to mould the political will of others; it is, through the analyses that he does in his own field, to re-examine evidence and assumptions, to shake up habitual ways of working and thinking, to dissipate conventional familiarities, to re-evaluate rules and institutions and to participate in the formation of a political will (where he has his role as citizen to play).*" Dr. John C. Maxwell lets me know that "*Talent Is Never Enough.*" I couldn't have completed this project on talent alone. It took a well coordinated effort of encouragement, support, hard work, and dedication. Lastly, Archimedes speaks to what can be accomplished: "*Give me but one firm spot on which to stand, and I will move the Earth.*" Given a "firm spot to stand" anyone can achieve anything they dream. I am blessed to not only have a found a firm spot on which to stand, but that I can move the Earth.

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CHAPTER I

INTRODUCTION

As with many professional fields of study, faculty in public health have been thrust into online learning as a means to respond to preparing its workforce to meet the demands of future health challenges. The impetus for this demand was identified by seminal reports from the World Health Organization (WHO) and the Institute of Medicine (IOM) (IOM, 2003; WHO, 2006).

The reports examined two decades of research and found that there has been a demand for highly qualified professionals to lead, build, and implement a new public health infrastructure that addresses the rapidly changing discipline of public health (Clark & West, 2000; Dodds, Laraia, & Carbone, 2003; Edouard, Billot, Moussiliou, Francis, Khaled, & Serge, 2009; IOM 2003; WHO, 2006). Further, the reports highlighted that the public health workforce was understaffed in remote areas of the United States and that many public health professionals in these areas were without public health training or experience (Bruce, Gresh, Vanchiswaran, & Werapitiya, 2007; Billot, 2007; Edouard et al., 2009; Laraia, Dodds, Benjamin, Jones, & Corbone, 2008; IOM, 2003; Mokwena, Mokgatle-Nthabu, Madiba, Lewisa, & Ntuli-Ngcoboa, 2007; Rosenblatt, Casey, & Richardson, 2002; WHO, 2006). Additionally, findings from these reports were used to initiate an investigation into the state of public health in the southwest region of the United States.

This dissertation follows the style of the *American Educational Research Journal*.

In 2004, a university system in the southwest region of the United States, through the provision of education, research, and patient care authorized a Task Force on the Future of Public Health to take the initial steps necessary to investigate and address the challenges facing public health in that state. In 2005, the State Task Force on the Future of Public Health report concluded that the overall state of public health was poor in comparison to national averages and was likely to further deteriorate in the absence of corrective action. The report made several findings. These findings included:

1. Support for public health was inadequate, as demonstrated by its lacking of a public health infrastructure;
2. Poor salaries for personnel;
3. Insufficient levels of training of public health personnel;
4. State and local public health expenditures were well below the national average; and
5. A shortage of well-trained public health professionals and that would increase substantially over the next decade.

In addition, the reports suggested that the three schools of public health within this particular state should collaborate with other institutions in the state to significantly increase opportunities for public health education. Lastly, the report concluded that educational and research collaborations between public health and other health professions would be an essential part of improving public health.

Such findings from the report gave great concern about addressing the emerging threats to the status of public health in this particular state. These threats include

bioterrorism, inadequate water and waste treatment systems, increases in heart disease, obesity, sexually transmitted infections, and border region challenges.

In order to meet the challenges as outlined in the Task Force on the Future of Public Health report (2005), the national challenges outlined in the Institute of Medicine National State of Public of Public Health Report (2003), and the international challenges outlined in the World Health Organization Report (2006), the Task Force recommended an increase in educational and professional development opportunities in public health.

These opportunities were:

1. Offer a bachelor's degree of public health;
2. Develop certificate programs for public health practitioners;
3. Increase distance-learning opportunities to include internet based or tele-campus type programs;
4. Explicitly increase the public health education content in the curriculum of medical, nursing, dental and allied health schools; and
5. Explore collaborations to provide annual educational and or research programs for professionals and the community through continuing education and outreach.

Based on the recommendations of the state report, a School of Public Health within this particular state embarked on a mission to bridge the gap between the concerns of the international and national report with the public health challenges facing the state where the school was located. Additionally, the report offered opportunities for schools of public health in the region to build a strong public health professional

community through distance education, with emphasis on web based or online instruction. This paradigm of teaching and learning affords public health professionals the opportunity to engage in public health education and at the same time, develop new skills needed for the public health workforce (Billot, 2007; Edouard et al., 2009; Escoffery, 2005; Mokwena, Mokgatle-Nthabu, Madiba, Lewisa, & Ntuli-Ngcoboa, 2007; WHO, 2006).

Faculty Response and Participation in Online Learning

Over the past decade, the number of online courses and programs has grown tremendously (Allen & Seaman, 2008; Moore & Kearsley, 2005; Wait & Lewis, 2003). As student enrollment and the number of online courses continue to increase, institutions will need faculty who are willing to accept and participate in online learning, specifically developing and teaching online courses. With the number of online courses and programs on the rise (Allen & Seaman, 2010) faculty participation will become key as online learning progresses.

As stated in Allen and Seaman (2008) and Saba (2005) faculty who participate in online learning stem from a population pool of faculty who generally teach traditional courses. NCES (2008) as cited in Allen and Seaman reported that in 2005, 72% of 16 southern institutions of higher education used mainly core faculty to instruct online courses. While the use of traditional faculty to teach online may appear to be a quick and uncomplicated solution to the need for faculty participation and involvement in online learning, Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw, and Liu (2006) suggests that the faculty experience, aspects of design and delivery of online courses, as well as

challenges and opportunities faculty encounter need to be explored in order to facilitate and support successful online programs and the faculty who teach in such programs. Supporting faculty and providing support is crucial for the process of designing, developing, and instructing online courses or programs (Bruner, 2007; Cuellar, 2002; Kyei-Blankson, 2009).

Like most disciplines, faculty in public health have been expected to respond to the increasing demands for online learning (Edouard et al, 2009; Escoffery, et al, 2005; Reeves & Reeves, 2007). Such response requires exploration into the experiences of faculty in online learning, the barriers or challenges faced in this paradigm of learning, and benefits received from their response and participation in online learning (Laraia, Dodds, Benjamin, Jones, & Corbone, 2008; Reeves & Reeves, 2007).

Statement of the Problem

Like many professional fields, public health faces a workforce shortage. At the same time, a new focus within the profession has emerged called public health preparedness (APHA, 2009; Umble, Shay, & Sollecito, 2003). Public health preparedness is the ability to prepare for and respond to public health emergencies. In addition, researchers in the field of public health recognized the importance of face-to-face training, opportunities for hands-on exercises, and experiences to help communities and public health agencies prepare for and respond to public health emergencies. Researchers also recognize that traditional methods alone cannot meet the requirements for public health preparedness training for a wide and varied audience (Umble, Shay, & Sollecito, 2003).

To meet this shortage and focus, online learning has been shown to be a viable solution for improving the capacity of the current and future public health workforce (Dodd, Laraia, & Carbone, 2003; Billot, 2007; Edouard et al., 2009; Escoffery, et al., 2005; MacDonald, Alexander, Ward, & Davis, 2008; Mokwena, Mokgatle-Nthabu, Madiba, Lewisa, & Ntuli-Ngcoboa, 2007; Umble, Shay, & Sollecito, 2003; WHO, 2006). However, to date, few online learning studies have been conducted in public health (Billot, 2007; Mokwena, et al. 2007) and as suggested by Laraia, Dodds, Benjamin, Jones, and Corbone (2008) little is known about the successes of online learning in public health or in preparing public health faculty to setup successful online programs, including their experiences in online learning and their perceptions of barriers, challenges, and benefits associated with online learning. Therefore, as schools of public health embrace online learning to meet workforce demands and educational enhancements, research is needed to study the successes and failures of online learning in public health (Billot, 2007; Dodd, Laraia, & Carbone, 2003; Edouard et al., 2009; Escoffery, et al., 2005; Laria, et al., 2008; MacDonald, Alexander, Ward, & Davis, 2008; Mokwena, Mokgatle-Nthabu, Madiba, Lewisa, & Ntuli-Ngcoboa, 2007; Umble, Shay, & Sollecito, 2003; WHO, 2006). Additionally, research is needed to explore and document the experiences of public health faculty who develop and teach online courses. Lastly, research is needed to study public health faculty perceptions of online learning and identify barriers, challenges, and benefits associated with online learning in public health. Consequently, an investigation into the experience of public health faculty

developing and teaching online courses is paramount as online learning continues in public health.

Purpose of the Study

The purpose of this study was to explore the lived experience of public health faculty who develop and teach online courses. This was achieved through an exploratory phenomenology research study at one school of public health. To meet this purpose, this research:

1. Explored the lived experience of selected participants in a school of public health setting, who developed and taught online courses;
2. Examined the experiences gained from the process and activities of developing and teaching online courses;
3. Provided insight about how faculty develop and teach online courses.

Research Questions

Three research questions guided this study. The research questions were:

1. How do public health faculty describe their experience of developing and teaching online courses?
2. What barriers and/or challenges were voiced by public health faculty who develop and teach online courses?
3. What benefits of developing and teaching online courses were shared by public health faculty?

Significance of the Study

This study contributed to the knowledge base about how public health faculty develop and teach online courses, the factors that contribute to and influence their experiences, and how public health faculty could best be served while developing and teaching online courses. Since few online learning studies have been conducted in public health (Billot, 2007; Mokwena, Mokgatle-Nthabu, Madiba, Lewisa, & Ntuli-Ngcoboa, 2007), this study provided an opportunity to add to the public health and online learning literature. Further, while current research on faculty participation in online learning has focused on program and course design, issues related to the faculty's experience developing and teaching online courses has largely been ignored (Chen & Chen, 2006; Johnson, 2008; Santilli & Beck, 2005; Sugar, Martindale, & Crawley, 2007; Tallent-Runnels, et al. 2006), therefore, this study provided an opportunity to add to the literature on the topics being explored.

Lastly, this study sought to provide data on how public health faculty develop and teach online courses and the elements that contribute, shape, and influence their experience. This will help public health institutions to identify, plan for, and provide support services to increase online faculty in this modality of teaching in public health.

Theoretical Bases for Study

In deciding upon a research project and in developing this study, two concepts emerged from the study; the first being adoption and the second being experience. Adoption according to Straud (2009), examines the individual and the choices individuals make to accept, participate, or reject a particular innovation. Experience,

according to Dewey (1938), allows one to understand how past events and the interactions of past environments shape what is learned from a given experience. Taken together, this conceptual framework sought to bring meaning and understanding to the elements that influence and shape the experiences of public health faculty who develop and teach online courses. In order to explore this phenomenon, the Unified Theory of Acceptance and Use of Technology model (UTAUT) (Venkatesh, Morris, Davis, and Davis, 2003), a leading theory of technology adoption and the Theory of Experience (Dewey, 1938) were used to guide the study.

The literature on the use of technology has identified various technology acceptance models and frameworks for factors influencing individual decisions to participate in an innovation. As early as the 1970s, many models or theories have been proposed and widely discussed to explain users' acceptance of technology and their experience. In 2003, Venkatesh, Morris, Davis, and Davis (2003) examined eight of the most common theoretical frameworks and models used to understand the individual use and adoption of technology. These theoretical frameworks were the theory of reasoned action, the technology acceptance model, the motivational model, the theory of planned behavior, a model combining the technology acceptance model and the theory of planned behavior, the model of personal computer utilization, the innovation diffusion theory, and the social cognitive theory.

These models were all included as previously used constructs and were used to inform organizations about who will adopt and use an innovation most quickly.

According to Venkatesh, Morris, Davis, and Davis (2003) these theories were criticized

as being fragmented and lacking a cohesive model that accounted for the numerous factors that technology use. Venkatesh, Morris, Davis, and Davis (2003) empirically compared these individual theories through various validation models and formulated a new theoretical model based on the more salient characteristics of the eight models to form a unified model for understanding technology use and acceptance.

The Unified Theory of Acceptance and Use of Technology (UTAUT) model states that four key determinants of use, three secondary determinants of use, and four moderators of individual use behaviors play a significant role as direct determinants of user acceptance and use behavior. These determinants include performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy is defined as the degree to which an individual believes that using a particular technology or system will help him or her to attain gains in job performance. The effort expectancy is defined as the degree of ease associated with the use of a technology or system. The social influence is defined as the degree to which an individual perceives how important others believe he or she should use a new technology or system. Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the technology or system (Venkatesh, Morris, Davis, & Davis 2003).

The three secondary determinants involved in the Unified Theory of Acceptance and Use of Technology (UTAUT) model include attitudes toward using technology, which is defined by the degree to which an individual believes he or she should use a particular technology; self efficacy, the degree to which an individual judges his or her

ability to use a particular technology to accomplish a particular job or task; and lastly anxiety, which refers to the anxious or emotional reaction associated with the use of a particular technology.

The four moderators of individual use behavior include gender, age, experience, and voluntariness. Venkatesh, Morris, Davis, and Davis (2003) states that gender reflects being male or female; age reflects a continuous time variable reflective of the person adopting the technology; experience represents prior interaction and knowledge gained from previous and current events and interactions with similar technologies under adoption. Voluntariness refers to ones' participation in using technology as either being forced or being willing to try a technology or system due to ones' own interests. Venkatesh, Morris, Davis, and Davis (2003) also assert that gender, age, experience, and voluntariness of use helps to explain behavior differences relating to the innovation under adoption.

Based on the Unified Theory of Acceptance and Use of Technology model (UTAUT) personal factors, characteristics of the innovation, and the influence of the individual context, it is suggested by UTAUT that these elements shape both the experience and the decision to use technology (Venkatesh, Morris, Davis, and Davis 2003). Although the Unified Theory of Acceptance and Use of Technology model (UTAUT) provides a discussion on experience, the discussion is shallow at best. Dewey (1938) is used to expand the concept of experience relating to this study.

Dewey (1938) introduces an experience based framework to harness the native tendencies of the mind. Dewey argues:

We learn from every experience, and if we are to educate, we must learn to educate from an experiential perspective. [We need to] turn education into valued experiences that have positive impacts on individuals so he/she in turn will make a positive contribution in the future.

Experience, according to Dewey (1938) is comprised of two principles. The first is the principle of continuity and second is interaction. Continuity refers to past events influencing the present and how ones' experience of an event, observation, or moment is unique and is profoundly influenced by ones' experience of past moments. The principle of interaction refers to present experiences arising from interactions between past experiences and present situations.

Dewey (1938) also lets us know that experience is an "interaction" between the external environment, whether objects, people, or surroundings, and the individual's internal state, including knowledge, skills, and attitudes are shaped by prior experiences. Taken together, the principles of continuity and interaction means that what individuals may observe or learn from a given experience is influenced by their prior experiences and by the physical and social settings of the previous and current experience. This theory perhaps can provide useful insights into understanding the experience of public health faculty who develop and teach online courses, the outcomes of those experiences, and any potential learning opportunities that may come from the overall experience (Dewey, 1938, p.28).

Definition of Terms

For the sake of clarity, it is necessary to define my use of several terms. For the purpose of this study the following operational definitions apply:

1. *Distance Education*: Educational opportunities delivered through the use of information and communication technologies in which the instructor and students are separated by time, location, or both (Campbell, 2004; Charp, 1997; Moore & Kearsley, 2005).
2. *Experience*: The active union of continuity and interaction. Continuity refers to past events influencing the present. Ones' experience of an event, observation, or moment is unique and is profoundly influenced by ones' experience of past moments. The principle of interaction refers to present experiences arising from interactions between past experiences and present situations. Taken together, what individuals may observe or learn from a given experience is influenced by their prior experiences and by the physical and social settings of the previous and current experience (Dewey, 1938).
3. *Information and Communication Technology*: ICTs refer to the fusion of computers and telecommunications devices such as networks and the Internet. This infusion of tools allows for communication, collaboration, and the sharing of information resources regardless of time and location (Akdemir, 2008; Kvasny, 2006; Tubaishat, Bhatti, & El-Qawasmeh, 2006).

4. *Learning Modalities*: Refer to the learning style of the student. There are three basic modalities to process information to memory: visual (learning by seeing), auditory (learning by hearing), and kinesthetic (learning by doing) (Bonk, & Zhang, 2008).
5. *Blended learning*: The combination of multiple approaches to learning that refers specifically to the provision or use of resource, which combine e-learning (electronic) or m-learning (mobile) with other educational resources (Bonk & Graham, 2006).
6. *Face to face*: A traditional learning and instructional environment whereby an instructor provides direct instruction to students (Bonk & Graham, 2006).
7. *Fully online instruction*: Learning, training or a course delivered 80% to 100% through the Internet and web-based software (Allen & Seaman, 2010; Bonk & Graham, 2006).
8. *Online Learning*: The intentional and unintentionally planned curriculum, instructional, and learning experiences that take place via the world wide web through the use of information and communication technologies and learning management systems to help convey course content and knowledge that encourages interaction and interactivity amongst students, the content, and the instructor (Bonk, 2006).
9. *Public Health*: Public health is the practice of preventing disease and promoting good health within groups of people, from small communities to entire countries. The aim is to protect all people and their communities from preventable, serious health threats, and strives to assure community-based health promotion, disease

prevention activities and preventive health services are universally accessible (American Public Health Association, 2009).

Assumptions

An assumption of the study was that faculty drew from their experiences as faculty members when developing and teaching online courses. Secondly, the study's research method is based on the assumption that the interpretation of a phenomenon can be bracketed in order to understand others' experiences. A third assumption related to the qualitative framework of the study is that multiple realities exist and knowledge is socially constructed. The researcher also assumed that the faculty honestly and fully described their experiences of developing and teaching online courses.

Limitations

This study sought to explore the elements that contributed to and influenced the experiences of five public health faculty, who developed and taught online courses, therefore the result of this study cannot be generalized because the data was context specific to a particular case at a specific school of public health. Further, the findings of the study may not be generalized and applied to a larger population because of the qualitative nature of the data, the non-random selection of participants, and the small sample size; however, the study has transferability to similar contexts and situations. The study may be limited by the researcher's ability to bracket his own experiences and remain without bias while collecting and analyzing data. Though the researcher made every attempt to set aside prejudices, the complexity of accomplishing this is understood, and the researcher admits that this may limit the study's results. Finally, the

study may also be limited because data collection relied heavily on participants' interviews, which may have been influenced by participants' recall and bias.

Organization of the Study

The study is divided into seven major chapters. Chapter I provides an introduction to the study, problem statement, research questions, definition of terms, and significance of the study. Chapter II consists of the review of related literature. Chapter III explains the methodology and procedures used to conduct the study, as well as a profile of the participant, who participated in the study. Chapter IV contains the participant's experience. Chapter V contains a discussion of themes that emerged from the study. Chapter VI contains the findings of research questions one, two, and three. Chapter VII contains a discussion of results, recommendations, and implications for future research.

CHAPTER II

REVIEW OF LITERATURE

Exploring the experience of public health faculty, who develop and teach online courses, draws upon not only academic foundations, but also advances practice, aimed at exploring the technical, cognitive, and aesthetic basis of human interaction as mediated by technology. This literature review is used to acquaint the reader with the research associated with the faculty response to online learning including their experiences, perceived barriers, challenges, and benefits associated with this modality of learning. Lastly, this review of literature will acquaint the reader with online learning in public health.

With advances in ICT's and new developments in computer technology, online learning has been propelled to the forefront of higher education, providing educational and access solutions to students from diverse geographical locations (Akdemir, 2008). As the number of courses increase in higher education, experienced faculty are faced with the possibility of teaching and converting their well established face-to-face courses and teaching strategies into an online environment (Sugar, Martindale, & Crawley, 2007).

Based on this growing trend, Reeves and Reeves (2007) contend that due to the increasing popularity and affordability of online learning increasing, health and social work educators have joined their academic colleagues throughout higher education in exploring the possibilities of teaching and learning online and offering online learning opportunities. Degrees and continuing education credits can be earned in many fields

such as nursing (Ostrow & DiMaria- Ghalili 2005; Fay, Johnson & Selz 2006), public health (Umble, Shay & Sollecito 2003; Stone, Barber & Potter 2005), social work (Sarnoff 2005; Wilke & Vinton 2006), and related disciplines.

Like most disciplines, faculty in public health have been expected to respond to the increasing demands for online learning (Edouard et al., 2009; Escoffery et al., 2005; Reeves & Reeves, 2007; WHO, 2006). Such response requires exploration into the experiences of faculty in online learning, the barriers or challenges faced in the paradigm, and benefits received for their response and participation in online learning (Laraia et al., 2008; Reeves & Reeves, 2007). This literature review explores the areas outlined and provides the reader with a contextual background in:

1. Defining online learning;
2. A historical perspective of online learning;
3. Online learning in higher education;
4. Faculty response to online learning in higher education including issues relating to the faculty role in online learning, barriers, challenges, benefits, and experience;
5. Online learning in public health; and lastly
6. Theoretical framework guiding the study.

Defining Online Learning

Undoubtedly, online learning is one of the most recent and powerful implementations of technology in the field of education (Allen & Seaman, 2010; Appana, 2008; Fish & Gill, 2009; Mitchell & Geva-May, 2009). As a result, online

learning has become an important component in education and has a deep impact on teaching and learning processes (Allen & Seaman, 2010; Appana, 2008; Fish & Gill, 2009; Mitchell & Geva-May, 2009). This application of technology, to a learning environment, has been involved in increasing the speed, quality and relevance of learning (Sugar, Martindale, & Crawley, 2007) and changing the roles of the classroom, students, and instructors in online instruction (Conceicao, 2006). Classrooms have become virtual classrooms to improve access to advanced educational experiences, by allowing students and instructors to participate in remote learning. Thus, students are no longer bound by a specific location, building, or time to be part of a class. Instructors can maximize their benefit and take the initiative to employ this technology in their teaching methods at all levels (Conceicao, 2006).

Online learning is a primary method for distance education and is delivered via the Internet. Many universities and colleges utilize online learning as a means of distance education. Online learning has a variety of ways to achieve educational goals over geographic distance with diverse methods. Defining distance education is key to a good understanding of online learning. Moore and Kearsley (2005) defines distance education as an instructor learner relationship that exist when learners and instructors are separated by space and/or by time and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements (Moore & Kearsley, 2005, p. 2).

A fundamental concept common to online learning is that online learning is a pedagogical form of education, where students and instructors are separated by place and oftentimes using technology as delivery tools to enhance educational objectives (Appana, 2008; Britt, 2006). Place separation means students and instructors are in different geographic locations, and sometimes in different countries, where they do not meet at all. Time separation in online instruction means interactive communication between students and instructors are either in real time (synchronous), such as teleconferences and chat sessions or with no preset times (asynchronous), which allows students to participate in class at their preferred times without requiring them to be engaged at the same time using email and online discussion forums (Hiltz & Goldman, 2005; Moore & Kearsely, 2005). Information and communication technology is used as a bridge for communication between students and instructors to facilitate delivery of instructional materials.

Thus in essence, online learning can be described as an intentional and unintentional planned curriculum, instructional, and learning experiences that take place via the world wide web, through the use of information and communication technologies and learning management systems to help convey course content and knowledge that encourages interaction and interactivity amongst students, the content, and the instructor, who serves as a learning and knowledge facilitator (Bonk, 2006). This definition demonstrates the power of using information and communication technology to deliver instructional materials.

For the purpose of this study, online learning will refer to the use of Internet, the World Wide Web, ICT's, and streaming media to deliver intentional and unintentionally planned curriculum, instructional, and learning experiences that take place via the world wide web, through the use of information and communication technologies and learning management systems, to convey course content that encourages interaction and interactivity amongst students, content, and the instructor (Bonk, 2006). This form of learning requires a special system of course design, special instructional methods, and special techniques for communication, and special organizational and administrative arrangements (Allen & Seaman, 2010; Appana, 2008; Fish & Gill, 2009; Mitchell & Geva-May, 2009; Moore & Kearsley, 2005).

Historical Perspective of Online Learning

Online learning is the latest development of distance education and is delivered via the Internet using the World Wide Web. It has replaced other types of distance education methods such as television, video, audio tape, and fax (Allen & Seaman, 2010; Moore & Kearsley; Nipper, 1989).

The term online learning has been used to describe an educational setting in which teaching and learning take place within an Internet-based environment (Berge & Collins, 1995; Berge, Muilenburg, & Van Haneghan, 2002). More recently the definition of online learning has been expanded to represent any class that offers its curriculum via the Internet thereby allowing learners to participate regardless of geographic location (place-independent), theoretically 24 hours a day (time-independent) (Bonk, 2001; Bonk, 2006).

Online learning is an evolved form of distance education and is the latest development of distance education. Nipper (1989) as cited in Connelly and Stansfield, identifies three generations of distance education. The first generation is referred to as the “correspondence model”. This educational model provided teaching and learning mostly through paper-based instruction and was characterized by the mass production of educational materials. The difficulty with correspondence education has been the infrequent and inefficient form of communication between the instructor and learners. Further, it was difficult to arrange for peer interaction in correspondence based distance education. The second generation, sometimes referred to as the ‘multimedia model’, was provided through integrated multimedia, such as delivering courses via television or introducing materials like audio and video tapes, computer-based learning in addition to printed material. The third generation was provided through two-way communications media such as audio video conferencing and broadcast technology.

Moore and Kearsley (2005), refers to four generations of distance education. The first generation can be classified as the correspondence model. Beginning early in the 1890’s, the correspondence model used the postal mail system as a mediator between students and instructor. In this form of distance education, hard copies of course materials and study guides were sent to students. Students would receive feedback for pursuing a learning objective by mail. Students achieved their education, while they were at a distance, from the instructor and other students. In this method, mail was the only means of communication between the instructor and the student. This model of

correspondence course distance education continued as the major form of distance education until the 1950s.

The second generation began in the 1970s, as open universities integrated multiple technologies into their education systems. In this mode of distance education, distance education moved from formal structure of mail ordered correspondences to the utilization of multiple technologies including television, video, radio, audio tape, and fax (Moore & Kearsley 2005).

Moore and Kearsley (2005) described the third generation of distance education emerging at the end of the 1970s and the early 1980s, when institutions of higher education delivered instructional materials via satellite, television, videotape, telephone, and cable digital networks. The fourth generation, as described by Moore and Kearsley (2005), began in the early 1990's. In this particular era, the delivery method of education expanded continually, due to advances in ICT. Instructional programs were delivered to students by computer networks, computer-based multimedia, and distance conferencing. New technology continued to be introduced into the field of education. The Internet, World Wide Web, streaming-media, and personal computers became powerful mechanisms that drove online learning.

Taylor (2001) as cited in Connelly and Stansfield defines two further models of distance education that introduce the medium of the Internet. The fourth generation features online delivery of interactive multimedia, access to Internet resources, and computer-mediated communication. This latter facility enabled instructors to introduce digitally mediated asynchronous interactions with and among learners, allowing instructors and learners to be separated in both time and distance. The fifth generation includes the fourth generation features, but adds systems that streamline course production and learner services.

Connelly and Stansfield, (2006) argue that Taylor's fourth and fifth generation models can now be divided into three generations, representing more sophisticated usage of the Internet and interactive technologies. The fourth generation of distance education (the first generation of online learning) was define as a passive use of the Internet, consisting primarily of conversion of course material to an online format, low-fidelity streamed audio/video, and basic mentoring using email.

The fifth generation of distance education (the second generation of online learning) used more advanced technologies consisting of high bandwidth access, rich streaming media, online assessment, and virtual learning environments, that provided access to course material, communication facilities, and learner services. The sixth generation of distance education (the third generation of online learning) is described as a more collaborative learning environment based much more on the constructivist epistemology, promoting reflective practice through tools like ePortfolios, blogs, wikis,

online communities, and using interactive technologies such as online visualizations, games, and simulations.

New literature has emerged (Adkins, 2008; Connelly & Stansfield, 2006; Liu & Hwang, 2009; Liu & McCombs, 2008) and the field is now starting to see the developments of mobile learning through devices such as PDAs (personal digital assistants), mobile phones, and smart-phones. Initial results on the use of mobile learning have been encouraging and research by Adkins, (2008) and Liu and Hwang (2009) suggest, for example, that mobile learning enhances autonomous and collaborative learning and that mobile learning can be applied to a wide age range of learners. According to Liu and McCombs, (2008) mobile learning is still at an early stage; however, as these devices become more functional and commonplace, education should expect to see significant developments in this area. As concluded by Liu and McCombs (2008) mobile learning has the potential to provide truly “anywhere” “anytime” learning. The six generations are summarized in Table 1.

Table 1: Evolution of Online Learning: Adapted from Taylor (2001)

| Evolution and Time Frame of Online Learning | | |
|---|---|---|
| Era | Focus | Characteristics |
| 1890 – 1930 | First Generation – The Correspondence Model | <ul style="list-style-type: none"> • Print Media • Mail Correspondence |
| 1930 – 1980 | Second Generation – The Multimedia Model | <ul style="list-style-type: none"> • Print Media and Photo Slides • Audio & Video Tape • Radio • Computer Based Learning • Interactive Video (Disk and Tape) |
| 1980 – 1994 | Third Generation – The Teleconferencing Learning Model | <ul style="list-style-type: none"> • Audio-teleconferencing • Video conferencing • Audio-graphic Communication • Broadcast TV/Radio |
| 1994 – 1999 | Fourth Generation - (First Generation of Online Learning) The Behaviorist Online Learning Model | <ul style="list-style-type: none"> • Online materials with simple graphics • Access to internet resources • Low fidelity streaming • Email |
| 1999- 2003 | Fifth Generation – (Second Generation of Online Learning) The Flexible Online Learning Model | <ul style="list-style-type: none"> • Online materials with interactive multimedia and rich streaming media • Access to Internet resources • Virtual learning environments and online assessments • Rise of the course management system |
| 2004 – present | Sixth Generation (Third Generation of Online Learning) The Constructivist - Interactive Online | <ul style="list-style-type: none"> • Reflective (.e.g. web 2.0, social media, ePortfolio) |

Online Learning in Higher Education

In the higher education, online learning relates particularly to Internet-based flexible delivery of content and programs that focus on sustaining particular communities of practice or content areas. In the context of a wider education community, the use of online learning in higher education has historically had a connotation that embraced a diverse range of practices, technologies, and theoretical positions. Online learning not only focuses on the online context, it also includes a full range of computer-based learning platforms, delivery methods, genres, formats and instructional technology such as multimedia, educational programming, simulations, games, and the use of new media on fixed and mobile platforms across all discipline areas (Moore & Kearsley, 2005). Online learning is often characterized by active learning and student centered pedagogical techniques (Barker, 2003; Boerema, Stanley, & Westhorp, 2007; Bonk, & Dennen, 2003; Bonk, 2006; Browne, 2005; Conceicao, 2007). Further, Akdemir (2008) reveals that the defining aspect or characteristic of online learning is not only a result of the increasing adoption of constructivist paradigms, but is a consequence of the affordances of ubiquitous global information and communication technologies that allow for student center interaction and engagement.

Sugar, Martindale, and Crawley (2007) suggests that as institutions of higher education face the challenge of providing quality educational opportunities, the field of distance education through online learning continues to accelerate as a viable means of providing more access to a greater number of students. Allen & Seaman (2008) asserts that online learning has quickly evolved into a popular method of distance education.

This is illustrated by the recent report on the status of online learning by Allen & Seaman (2010). This report states that over 4.6 million students took at least one online course during the fall 2008 academic term. This was a 17 percent increase over the number reported in the previous year. Further, the report suggests that the 17 percent growth rate for online enrollments far exceeded the 1.2 percent growth of the overall higher education student population. Lastly, the authors contend that more than one in four colleges and universities students now take at least one course online. The National Center for Educational Statistics (2010) also suggests that the growth of online learning has not reached its limit and that current data shows that double digital growth is expected to continue from year to year.

Through online learning, students have an opportunity to pursue college education in a variety of disciplines previously available only on-site or at one campus (Kim & Bonk, 2006; Simonson, Smaldino, Albright, & Zvacek, 2006). Such flexibility is of particular importance for higher education, where the obligation to deliver public higher education extends across multiple locations and broadening educational access and higher education opportunities (Allen & Seaman, 2008; Bonk & Graham, 2006; Larreamendy-Joerns & Leinhardt 2006; Sugar, Martindale, & Crawley, 2007).

Adult learners from many walks of life have embraced online learning, due to the convenience of taking courses from non-fixed locations without cost and time issues associated with travel to and from a traditional campus (Appana, 2008; Simonson et al., 2006). With online learning, adult learners appreciate:

1. The ability to interact with their peers;

2. Instant access to instructional materials;
3. Instant faculty communication and feedback; and
4. An environment that has little regard for age, race, or sex, which may often be communication barriers in a more traditional environment (Cuellar, 2002; Palloff & Pratt 2001).

By overcoming the confines of traditional classrooms, online learning offers increased flexibility regarding time, place, pace of study, and delivery of instructional content. While online learning may present new opportunities for some institution of higher learning and a viable alternative to the need for “physical” space (Jones, 2003), the need for faculty involvement in online learning remains a prevalent issue for those institutions that plan to continue offering instruction at a distance (Allen & Seaman; 2008; Chen & Chen, 2006; Matson, 2006; NCES, 2008; Nelson & Thompson, 2005; Reeves & Reeves, 2007; Schifter, 2004; Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw, & Liu, 2006).

Faculty Response to Online Learning in Higher Education

Earlier faculty who became involved in online learning did so on a voluntary basis, expecting compensation and other extrinsic rewards (Wolcott, 2004). However, in more recent years faculty have been expected to participate in online distance education as a part of their regular duties as faculty (Appana, 2008; Escoffery, Leppke, Robinson, Metler, Miner & Smith, 2005; Fish & Gill, 2009; Kim & Bonk, 2006; Mitchell & Geva-May, 2009; Reeves & Reeves, 2007). Despite this expectation, faculty have still been hesitant to convert their traditional courses to an online format (Appana, 2008; Bower,

2001; Cavanaugh, Gillian, Kromrey, Hess, & Blomeyer, 2005; Fish & Gill, 2009; Kim & Bonk, 2006; Mitchell & Geva-May, 2009; Reeves & Reeves, 2007). These authors found that many faculty feel uncertain and uneasy towards online learning, due to perceived assumptions regarding the quality of learning and student learning outcomes. This uncertainty stemmed from assumption concerning the nature of learning and mode of learning (Appana, 2008), subscribing to myths and misconceptions of online learning (Fish & Gill, 2009; Li & Atkins, 2005), lack of competency in technology and online learning methods (Simms, 2002; Feist, 2003; McGuire, 2005) and institutional incongruence with relation to faculty, attitudes, beliefs, and practices (Mitchell & Geva-May, 2009; Simpson, 2010). Further, Saba (2005) reveals that faculty who teach online are oftentimes unsure how to teach in this new environment, due to a lack of skill sets and experience in an online environment.

In an earlier discussion, Rockwell, Schauer, Fritz, and Marx (2000) evaluated the types of education, assistance, and support that faculty felt were needed to be successful in online learning. They concluded that assistance and support for developing instructional materials, developing interaction, and applying certain technologies were critical to faculty success in online environments. They further contend that faculty consistently felt that additional instructional and technical support was needed because faculty were genuinely concerned about the quality of their online courses and the amount of technical assistance and training available to them at their institutions for developing and teaching online courses.

Maguire (2005) found that faculty uncertainties for online learning were aimed at issues of quality, student learning outcomes, and academic engagement. Allen and Seaman (2008) and NCES (2008) contend similar findings that faculty assumptions regarding course quality, student learning outcomes, training, and engagement were reasons as to why faculty did not participate in online learning, despite the growing literature on online learning and student learning outcomes, and faculty involvement in online learning. Tallent-Runnels, et al. (2006) found that faculty lagged behind in accepting online learning because of the prevailing assumptions of course quality and lack of training and professional development to deliver instruction online. Reeves and Reeves (2007) and Paulus, Myers, Mixer, Wyatt, Lee, and Lee (2010) concur with this study and found that faculty jump into teaching online without sufficient training or consideration for instructional planning, design, or assessment.

McLean (2005) suggests that the literature attributes the reluctance of faculty to participate in online learning was due to the lack of support, assistance, and training. Previous work on faculty response and participation in online learning (Conceicao, 2006) expand these dimensions to include adequate resources, technical and instructional support, quality professional development specifically for technology integration and online teaching and learning methods, as well as incentives and organizational support. This echoed similar findings of Keengwe, Kidd, and Kyei-Blankson (2009) who found in their study that examined the faculty experiences integrating instructional and online technologies for teaching. They assert that organizational support, adequate and quality

resources, training, and leadership are important factors that facilitate faculty adoption of instructional and online learning technologies for teaching and learning purposes.

Important to the discussion of faculty participation in online learning, Nelson and Thompson (2005) developed an online learning instrument to assess faculty barriers to participation in online learning. They found that the majority of respondents cited time, rewards, workload, lack of administrative support, cost, course quality, student contact, and lack of quality of equipment as barriers that influenced their unwillingness to participate in online learning. Nelson and Thompson (2005) further assert that training be provided to faculty to overcome negative dispositions of online learning and that leaders should attempt to incorporate the need for online learning in the institutions' missions. They also contend that a reconsideration of tenure and promotion decisions be examined in an attempt to support faculty workloads. They also contend that these measures would help faculty participate in online learning. Similarly, Nkonge and Gueldenzoph (2006) from their study of online learning identified inadequate hardware and software, slow internet connections, learners' procrastination, lack of technical expertise among the instructors, insufficient orientation for learners, and a lack of release time for instructors to develop and design their online courses as barriers to faculty participation in online learning. From their study, these barriers were found to influence faculty unwillingness to participate in online learning.

Supporting faculty and providing support to faculty was found to be significant for online learning, due to the number of faculty who begin online learning with little knowledge of the process or activities of designing, developing, and instructing online

courses (Bruner, 2007; Cuellar, 2002; Kyei-Blankson, 2009; Mcguire, 2005; Osborne, Kriese, Tobey, & Johnson, 2009; Paulus, Myers, Mixer, Wyatt, Lee, & Lee, 2010).

According to a National Center for Education Statistics report (2008), 40% of the institutions that offered courses at a distance expected faculty to teach without any training or preparation. This lack of knowledge and lack of preparation by institutions ultimately leads to online instruction that lacks continuity and quality further reinforcing faculty unwillingness to participate in online learning (Crawford, 2003; Johnsrud, Harada, & Tabata, 2006; Reeves & Reeves, 2007).

Lastly, Kosak, Manning, Dobson, Rogerson, Cotnam, Colaric, and McFadden, (2004) and Hinson and LaPraire, (2005) from their work on preparing faculty to teach online both contend that in order to facilitate an environment where faculty participate in online learning and produce effective online instruction, institutions must alter the methods by which faculty are prepared to transition to online environments and faculty must alter the way instruction will be provided to students in this new environment.

Faculty Emotional and Psychological Experience in Online Learning

Efforts to meet the demands of the 21st century learner have resulted in dramatic shifts in teaching methods and have increased the number of online courses offered by institutions of higher learning today. As a result, faculty are asked to consider teaching their classes either partially or fully online (Clark-Ibanez & Scott, 2008).

The pathway of course migration to online environments often begins with the assumption that instructional designs, grading procedures, and other methods that typically work in the traditional classroom would remain the same in online settings.

When faculty come to terms with the reality that these two environments are entirely different, they suddenly become frustrated (Bruner, 2007; Conceicao, 2006; Franklin & Blankson, 2001; Yang & Cornelious, 2005) and realize the need for professional development activities and support programs that will help them teach successfully online.

Further, many obstacles have been documented for instructors who are beginning to teach online. Instructors face the challenge of the preponderance of online courses, a distinct set of online student needs (e.g., independent learning, unlimited access to course content) and the need to promote interaction in online learning (Conceicao, 2006). This certainly has placed a burden on experienced instructors who have taught exclusively in face-to-face settings.

Acceptance of online learning within universities and individual curricula's have challenged previously established teaching methods and faculty responsibilities (Dabbagh, 2004). The transition to online learning for experienced faculty is not easy and has been labeled as "daunting", "painful" and "stressful" (Grosse 2004). For pre-tenured professors, developing and teaching online courses may be perceived as not helping one towards tenure and thus was seen as activities that interfered with faculty research responsible (Howell, Saba, Lindsay, & Williams, 2004). In addition, there is considerable evidence that teaching online requires additional extensive preparation time (Lorenzetti, 2006) and this preparation time was found to add additional stress on faculty (Lorenzetti, 2006). Further, Grosse (2004) found that veteran face-to-face instructors

had to revise their teaching methods. This was found to cause a sense of uncertainty and frustration for veteran faculty (Grosse, 2004).

According to Campbell (2006, p. 00) with the new teaching role, faculty have expressed “concerns for the loss of personal and intimate interactions” with their online students. Some veteran faculty who were new to online learning have expressed concerns about their lack of ability to teach skills requiring “hands on” instruction at a distance (Nelson & Thompson, 2005). Despite known extrinsic incentives (e.g. exposure to new technologies) and intrinsic incentives (e.g., flexible teaching schedule) to teach online (Parker, 2003; Kyei-Blankson, 2009), faculty did not see online learning as an attractive venture. Osborne, Kriese, Tobey, and Johnson (2009) and Tallent-Runnels, et al. (2006) state that it is imperative to address instructors’ concerns and obstacles that lead to anxiety, apprehension, and stress as they teaching at a distance.

Despite faculty’s emotional reaction to online learning, online learning presents a learning curve that may be difficult for faculty to undertake. As noted by Gerlich (2005, p.8) online teaching presented a “steep learning curve associated with learning to teach online.” Because of the many tools and strategies associated with online learning, faculty are sometimes left frustrated and exhausted, due to the intense work needed to teach online (Bruner, 2007; Conceicao, 2006; Kyei-Blankson, 2009; Paulus et al., 2010; Sugar, Martindale, & Crawely, 2007). Becoming a successful online instructor requires a change of the instructor’s perspective and role, as well as, opportunities for effective professional development (Lee & Busch, 2005). This transformation was reported to be

a painful, yet exhausting experience and was found to be overwhelming (Hinson & LaPrairie, 2005; Sieber, 2005) for both new and veteran.

Moreover, research has shown that faculty regard online teaching as more difficult than teaching traditional courses (Gerlich, 2005; Grosse, 2004; Hartman, Dziuban, & Moskal, 2000). Results of a survey of thirty two online faculty by Hartman Dziuban, and Moskal (2000) revealed that ninety percent of faculty believed online courses were to be more difficult to teach because of workload increases, due to more interaction with students. This led faculty to a sense of being overwhelmed. Similarly, Sellani and Harrington (2002) found that faculty became overwhelmed with designing online courses and their other demands as faculty including research and service commitments interfered. This caused additional workplace stress on faculty. Lao, and Gonzales (2005), found that faculty who taught online felt teaching online was difficult due to technological constraints. They also found that faculty would not want to teach future online courses, if adequate technical support was lacking in their first online learning experience. This was found to help reduce feelings of anxiety and stress associated with online learning.

Alvarez, Blair, Monske, and Wolf (2005) profiled a faculty assistance program and found that the stress of developing and teaching online course could be alleviated by a collaborative support program. They found that such a program not only helped in course design, but also helped to establish technological and pedagogical learning communities amongst current and future online faculty.

Additionally, Wegmann, and McCauley (2008) found that faculty complained that online delivery was more labor intensive because of the amount of time required to grade papers and respond to questions. Consequently, the authors suggest that course delivery, the amount of time to grade, and communication with students added to the frustration of online teaching.

Faculty Role in Online Learning

Over the past decade, the number of online courses and programs has grown tremendously (Allen & Seaman, 2008; Moore & Kearsley, 2005). As student enrollment and the number of online courses continue to increase, institutions will need faculty who are willing to accept the challenge and participate in developing and teaching online courses. Due to the complexity and nature of online learning environments, as well as the manner in which teaching online differs from teaching in traditional environments, some faculty may need to rethink their role in online learning (Ali, Hodson-Carlton, Ryan, Flowers, Rosem, & Wayda, 2005; Conceicao, 2006; Johnson, 2008; Panda & Mishra, 2007; Lee & Busch, 2005; Riffie, 2003; Scagnoli, 2001).

Scagnoli (2001) work on analyzing how traditional faculty teach online found that instead of being content or subject matter experts, the faculty became more of a facilitator. Collins and Berge, (as cited in Palloff & Pratt, 2001) divided the roles of the online instructor into four categories including pedagogical, social, managerial, and the technical. They described the pedagogical role as one that revolves around educational facilitation. The social role involved creating a friendly social environment necessary for online learning. The managerial role involved agenda setting, pacing, objective setting,

rule making, and decision making. The technical role dealt with understanding the functionality of software, hardware, and peripherals to develop online courses, as well as to teach them.

Similarly, howbeit different, Coppola, Hiltz, and Rotter (2002) identified three faculty roles: cognitive, affective, and managerial from their research on online faculty. They defined the cognitive role as a role that connected with the mental processes of learning, information storage, and thinking. The affective role is defined as a role influenced by relationships between students, faculty, and the classroom environment. The managerial role is described as course management.

Riffie (2003) expands this work and states that in addition to the traditional role, faculty members who teach online now play the role of facilitator, teacher, organizer, assessor, mentor, role model, counselor, coach, supervisor, problem solver, and liaison between student and university administration. In contrast however, Liu, Bonk, Magjuka, Su, and Lee (2005) identified new emerging responsibilities for faculty who participate in online teaching. These roles include pedagogical, managerial, social, and technical attributes. Their findings revealed a stronger emphasis on the pedagogical roles including course designer, profession-inspirer, feedback-giver, and interaction-facilitator. Emphasizing those roles, Liu, et al. (2005) found that instructors need to have their roles transformed pedagogically, socially, and technologically, if they are to establish a more successful, engaging and fruitful environment for online learning.

Dabbagh (2004) explained that faculty have significantly more responsibility for establishing specific structures and processes in online learning than in a traditional

learning environment. Lorenzetti (2006) found a similar finding when he discovered that faculty new to the online learning would need to take time to understand the different roles and responsibilities in online teaching.

Barriers to Faculty Participation in Online Learning

In a major study of academic officers only 4.6% of these officers indicated there were no major barriers to widespread adoption of online learning (Allen & Seaman, 2008). These same academic officers, while rating student discipline as the first barrier, rated faculty issues a close second. Chief Academic Officers indicated faculty issues served as major barriers to the acceptance of online learning including faculty acceptance that online learning provides a valid learning medium, as well as issues related to time and workload (Allen & Seaman, 2008). Conceicao (2006) said the literature indicated time, effort, support, and compensation were four major areas of concern for online learning. Numerous studies have identified barriers to online learning. The top issues that emerged were faculty compensation, time, organizational change, technology expertise, support and infrastructure (Berge & Muilenburg, 2001; Conceicao, 2006; Kim & Bonk, 2006; Maguire, 2005; Porter, 2003). However, Appana (2008) concludes that the major barrier or limitation to faculty participation in online learning is the experience and knowledge of the instructor.

Pajo and Wallace (2001) states that barriers to faculty participation to online learning can be attitudinal (no faith in technology, unwillingness to work with technology, concerns about student access), personal (lack of knowledge, skills, training, role models and time), or organizational (inadequate technical support, hardware,

software, instructional design, no recognition of the value of online teaching, policy). All of these attributes, according to Pajo and Wallace (2001), were couched within the concept of institutional organization, when one considers organization is defined as the institution's practices, activities, procedures and structures to support online learning.

Organizational Barriers

In an earlier study, Bonk (2001) found four major barriers to participation of college faculty in online instructional settings. These barriers were identified as time to learning technology tools and software, shortages of instructional development grants and stipends, limited recognition by departments and institutions in promotion and tenure decisions, and minimal instructional design support. Maguire (2005) noted that lack of training, support, and technology skills as potential barriers to teaching online courses. Adding to support, Ensminger and Surry (2002) address faculty perceptions in online learning, noting areas such as preparation and training were a potential concern of faculty related to teaching online courses. Furthermore, Macy (2007) adds that training is a potential barrier to online learning, as the training may take faculty from other areas, which may make faculty reluctant to teach online courses. Brooks (2003) emphasized faculty needing to learn new technologies in order to teach online courses as a factor associated to teaching online courses. Moreover, Macy (2007) noted technical support as a primary concern that may prevent faculty from teaching online courses. Adding to this include the areas of equipment access to deliver high quality online courses. Shea, Pickett, and Li (2005) add inadequate training and support as another barrier to faculty participation in online learning. Additionally, faculty concerns of intellectual property

related to online course creation, which may affect faculty perceptions of online course workload and online course quality was also seen as a barrier (Myers, Bennett, & Brown, 2004).

Liu, Kim, Bonk, and Magjuka (2007) found that policy and the lack thereof, in addition to the lack of resources including equipment were barriers to faculty participation in online learning. Further, the authors found that the impersonal nature of the online environment was a barrier to faculty participation in online learning. In addition, they found the amount of time and the heavy work load needed for online teaching was a major barrier. Further, they found that faculty in their study showed specific concerns about striking a balance between teaching, quality, and time spent on one's online courses. Lastly, Liu, et al. (2007) found that unpleasant students or students whose attitudes and behaviors were negative when compared to their face to face classes were seen as a barrier.

In addition, supporting faculty and providing support to faculty was a significant barrier for online learning, due to the number of faculty who begin the online learning experience with little knowledge of the process of designing, developing, and instructing an online course (Osborne, Kriese, Tobey, & Johnson, 2009; Cuellar, 2002; Kyei-Blankson, 2007; NCES, 2008; Paulus et al., 2010). Panda and Mishra (2007) who studied faculty at a large national open university, suggest that in distance teaching institutions, where online learning initiatives are underway and where planners and administrators grapple with effective adoption and deployment of technology-enabled education, faculty attitude and motivation assume considerable significance as online

learning advances. They conclude that attitudinal pre-dispositions, institutional, and allied barriers including appropriate policy initiatives are a crucial role in making an effective shift from traditional teaching to web-enabled education. In addition, the results from their study found that the most significant barriers perceived by faculty included poor ICT access and infrastructure and lack of training in online learning, followed by institutional policy regarding instructional design for online learning.

Parthasarathy and Smith (2009) added to the discussion on barriers to online learning by classifying barriers to faculty participation into those related to the self interest of the faculty. These areas of self interest include instructor preparation time, class delivery issues, and schedule flexibility and those that related to faculty concerns for their students including course quality, student schedule flexibility, student behavior and student conduct. The final group dealt with faculty concerns for their institution including enhancing the institution image and responding to market trends. Further, Parthasarathy and Smith (2009) also stated that institutional factors of enhancing the institutions' image and responding to market competition and trends were critical to faculty participation in online learning and that if faculty perceive this to be incongruent, faculty would resist participation in online learning.

For pre-tenured faculty, participating in online learning may be perceived as not helping one towards tenure (Howell, Saba, Lindsay & Williams, 2004). Similarly, Orr, Williams and Pennington (2009) found an institution's recognition of faculty efforts to teach online in relation to the traditional concepts of scholarship, tenure, and promotion was an important motivational factor for sustaining effectiveness in an online learning

environment and that if faculty could not use online learning as a component of tenure and promotion, they were less likely to participate in online learning. Andersen (as cited in Green, Alejandro & Brown, 2009) discovered tenure-track faculty were more likely to teach online courses if they knew beforehand their efforts would count toward tenure.

Mitchell and Geva-May (2008) proposed that faculty acceptance of online learning was influenced by attitudes related to four variables. These variables include intellectual reluctance, support, change, and cost benefit. Mitchell and Geva-May (2008) also state that these variables form barriers to faculty participation in online learning. Based on these variables, problems arise with faculty resistance to online learning, because of a lack of fit between policy and its context, namely the organization and the actors within the organization. They contend that the closer the fit, the lower the level of resistance; hence a greater chance faculty will participate in online learning.

Appana (2008) contends that new technological developments have opened new possibilities for organizational chaos in relation to online learning. The author further contends that with the development of online courses and programs, come the need to revise current policies and processes, which lead to higher than anticipated amounts of time spent on administrative tasks and consequently unanticipated costs with online learning.

Simpson (2010) discovered that a lack of fit with the institutional mission and goals were primary deterrents of faculty participation in online learning. Furthermore, Simpson (2010) found that institutions lacked policy for faculty rewards for participating in online learning, course development and or promotion and tenure. Similarly, Mitchell

and Geva-May (2008) found that faculty were less likely to participate in online learning when there was an incongruence between distance education goals and the institutional mandate and goals.

Technology Barrier

Compared to face-to-face environments, courses delivered online rely on various types of technology tools and systems (Liu, 2005). Lari and Wiessner (2005) concluded that technical issues and challenges were primary determinants as to whether or not faculty would persist as online instructors. They observed that time spent learning to use new technologies, as well as the frustration with the malfunctioning of technology added to the barriers that influence faculty participation and response to online learning. Not surprisingly, previous studies indicate that technology has been perceived as one of the major challenges for online learning. For instance, Smith (2001) summarized six problems concerning online learning. Of these problems, two of them were related to technology issues; namely, time spent learning to use new technologies and frustration with the malfunctioning of technology. Perreault, Waldman, Alexander, and Zhao (2002) surveyed 81 professors who taught online courses, examining participants' perceptions related to the important problems in the development and delivery of distance-learning courses. Four key problems that they identified involved technology, including: (1) reliability of technology, (2) technology support provided by the institution, (3) student technology competence, and (4) teacher technology competence.

Instructional Barriers

It is noted that some faculty may resist online learning (Reeves & Reeves, 2007). Lorenzetti (2006) states that faculty resistance to online learning is because they are concerned that courses may require more time for advanced planning and the intense time required to facilitate learning online. Both presented barriers to online learning. Maguire (2005) states that faculty may be hesitant, due to the fact that they may lose autonomy and control of the curriculum, lack technical training and support, and lack release time for planning. Covington, Petherbridge, and Warren (2005) expanded the work of Maguire (2005) by discussing areas that form barriers to the adoption of change to include online learning. They found that faculty resistance to online learning included lack of institutional planning, support and recognition, and the need for faculty development in the areas of technology and pedagogy.

Relating to instructional barriers is the concept of course quality. While a study conducted by Wilson (2001) revealed that faculty perceived online instruction as being inferior to traditional teaching, Warren and Holloman (2005) concluded that both methods of instruction are equivalent, with no significant difference in student outcomes. Li and Atkins (2005) state that quality online learning depends on faculty not subscribing to myths of online learning. Common misconceptions of online learning identified by Li and Atkins (2005) are that nontraditional methods of delivery are perceived as being limited in content learning, promoting student isolation, serving as a one way learning process, encouraging student cheating, and requiring both learner and instructors to be proficient in technology. These myths present barriers to faculty

participation in online learning (Li & Atkins, 2005; Fish & Gill, 2009). Fish and Gill, (2009) revealed that faculty acceptance toward online learning is one of the single most critical barriers for faculty to overcome.

Pedagogical Transformation Barrier

Palloff and Pratt (2001) builds on the work of Anderson et al. (2001) and suggests that online learning requires moving beyond traditional pedagogy to adopt new practices. They also explain “Not all faculty are suited for the online environment” (p. 21). Further, they believe that “Faculty cannot be expected to know intuitively how to design and deliver an effective online course” (p. 23) because, even though courses in technology are becoming more available to faculty, “Seasoned faculty have not been exposed to techniques and methods needed to make online work successful nor sustain the shift from the traditional modes of teaching to online” (p. 23).

Alvarez, Monske, and Wolfe, (2005) research revealed that faculty using online learning and its related technologies face a variety of challenges when adapting their teaching styles to a framework compatible with a distance learning environment, such as, creating online communities. Panda and Mishra, (2007) extends this argument and argues that faculty not only face challenges adopting new pedagogical styles to teach online, they also face challenges in the social, managerial, and technical aspects of being an online instructor. Shieh, Gummer, and Niess (2008) explain that faculty who participate in online learning should remember that it is pedagogy and not technology that is critical to the success of online courses. In support of their assertion, Johnson, (2008) indicates that technology was a set of skills that faculty should acquire in order to

teach online; however, online pedagogical skills were a must. Johnson (2008) further states that faculty have to question their teaching and learning assumptions as they make the shift to online learning. Dempsey, Fisher, Wright, and Anderson (2008) conclude that faculty must rethink their teaching practices and retool themselves to prepare for online learning. This rethinking and retooling process may present challenges as faculty seek to participate in online learning (Barker, 2003; Conceicao, 2006; Conrad, 2004; Gallant, 2000; Hinson & La Prairie, 2005; Jaffee, 2003; Tallent-Runnels et al., 2006).

Benefits of Online Learning

Several studies have analyzed and revealed several potential benefits to online learning (Appana, 2008; Bartolic-Zlomislic & Bates, 1999; Britt, 2006; Clark-Ibanez & Scott, 2008; Conrad & Pedro, 2009; Coyner & McCann 2004; Curtis & Lawson, 2001; Koehler, Punyashloke, Hershey, & Peruski, 2004; Li & Akins, 2005; Maguire, 2005; Scott, Aragon, Shaik, & Palma-Rivas, 2000; Stick & Ivankova, 2004; Taylor, 2002). Main benefits for online learning include increased opportunities for and access to learning, flexibility of scheduling for instructors and students, improved faculty-student interaction, intense student participation, facilitation of higher order thinking, opportunities for new markets, improved costs, anonymity, student interaction and satisfaction, and growth in faculty skills in technology and pedagogy.

Access and Convenience

Within education as a whole, the most noteworthy online learning initiatives have been driven by one or both of two widely accepted goals. The first is providing greater access to educational opportunities for those who are disenfranchised by distance

or temporal constraints. The second is the earnest desire to enhance the quality of teaching and learning (Reeves, 2003; Dempsey, Fisher, Wright, & Anderson 2008).

Coyner and McCann (2004) and Liu, Kim, Bonk, and Magjuka (2007) state that accessibility is one of the most essential and common benefits of online learning. Students can gain access to information including syllabi, course assignments, scoring guides, power-point presentations, and supplemental materials 24 hours a day and seven days a week. Hammonds (2003) stated that this method of teaching allows students to be flexible in their use of time. Online learning provides a viable option for those who did not have the opportunity before, because they live far from campuses or have limited time for campus education (Reeves, 2003). Furthermore, online learning serves the needs of students from various backgrounds and age ranges. People who are not able to have access to traditional classrooms because of time, geography, financial considerations, family, and work constraints can have access to the resources online (Davison, 2005; Karber, 2003; Taylor, 2003).

Online learning also presents a benefit for students with disabilities who are unable to travel to attend classes on campus (Keeler & Horney, 2007). In this case, Keeler and Horney (2007) contends that online learning fits with students with disabilities learning method and enables them to be equal to other students, as well as to continue their education and achieve their goals.

Online learning provides a time-independent and place-independent learning environment, which makes it convenient and flexible for different learners (Reeves, 2003; Hammonds, 2003). Faculty, according to Lyons (2004), can enjoy the flexibility

of teaching at home instead of going to campus, and there are fewer hours spent preparing instructional materials for students.

Online learning overcomes the obstacles in a traditional class that may prevent students, who are unable to attend classes for any reason from completing their education. Additionally, online learning empowers the learner to take responsibility for their learning and engage them in adult learning opportunities for lifelong learning (Inoue, 2007) Moreover, online instruction enables institutions to expand resources, helps to meet emotional needs, and provides students with desired learning styles (Appana, 2008).

Lastly, Fish and Gill (2009) suggest that a benefit online learning offers is the ease and speed with which course materials may be updated. With online courses, instructors may edit their course materials and upload the new material instantaneously, making the materials available to students instantaneously. The time lag is removed, making this a benefit to both students and faculty.

Learning Styles and Facilitating Higher Order Thinking

Online learning enables institutions to expand resources, and provides students with desired learning styles (Britt, 2006). According to Reeves and Reeves (2007) online learning facilitates self-directed learning, authentic learning, problem-solving skills, and higher thinking skills. In addition, online learning offers great benefits for students, instructors, institutions, and communities that may not be available in traditional modes of learning.

A second attribute of online learning deals with the experience mediated by technology. (Davison, 2005) states that the experience brought on by multimedia is another significant benefit of online learning. Davison (2005) reported that “There is a range of multimedia tools available to create instructional materials to display text graphics, animation, video, and interactive simulations” (p. 22). Moreover, (Akdemir, 2008) reveals that ICT’s also creates more interactivity between instructors and students and among students themselves. Using synchronous or asynchronous communication techniques, students are engaged with one another in their discussion (Xu & Morris, 2007). Since students have to work in groups, online courses also encourage team building and group work (Aune, 2002; Coyner & McCann, 2004; Davidson, 2005; Boerema, Stanley, & Westorp, 2007).

A third attribute of online learning that presents a benefit is that online learning encourages independent learning and builds accountability of students (Coyner & McCann, 2004; Appana, 2008). Since students can review the lectures repeatedly, they gain more control over their learning and have more to say on what they wish to learn through a feedback system.

Anonymity

Appana (2008) states that another benefit of online learning is anonymity. Online learning provides students with a creative learning experience and removes the limitations of time, place, and discriminating factors such as age, dress, disabilities, race, and gender, allowing for greater participation from all students, including those who may be less inclined to speak in a traditional face-to-face setting.

In addition, Appana (2008) suggests that the lack of visual cues allows the instructor to treat all students in the same manner. Learner identity has emerged as a new strategic learning variable within online learning environments. Learner identity can be used as a deliberate learning strategy as in online role-plays or discussion forums with pseudonym postings. At other times students may use online learning as an opportunity to reconfigure their learner identity.

Interaction

Another benefit of online learning for students is its potential for interaction between instructors and students and among students. Palloff and Pratt, (2001) contend that interaction is the key to the learning and collaboration that results from this instruction. Bonk (2001) agrees that online instruction encourages high-quality interaction. In addition, students can work with each other in collaborative projects. These projects help students focus on real-world problem-solving and give them the opportunity to communicate with expertise. Further, Hiltz and Goldman, (2005) suggest that interaction in online instruction engages students in cooperative or collaborative learning that allows students the opportunity to develop new skills that leads to the development of a learning community, which is the greatest challenge and the greatest opportunity offered by online instruction.

Li and Atkins (2005) revealed that students perform better in online courses than students in face-face-courses, due to the flexibility and responsiveness experienced in online learning. Similarly, a recent meta-analysis conducted by the U.S Department of Education (2009) confirms such finding. Li and Atkins (2005) and Bonk (2006) also

discussed that students' satisfaction is positively impacted when (a) the technology is transparent and functions are both reliably and conveniently, (b) the course is specifically designed to support learner-centered instructional strategies and (c) the instructor's role is that of a facilitator and a coach.

Conceicao (2006) and Palloff and Pratt, (2001) suggest that ICT's allows distant groups to interact over the Web, work on shared topics, and build a sense of community even if students are in separate geographical locations. They further contend that learning communities provide learners with resources to acquire higher thinking skills, and knowledge, along with collaborative feedback from other students and instructors in learner-centered and self-directed learning. This helps students to validate their learning experiences, which occur(s) in a social context through collaboration, negotiation, debate, peer review and mentoring (Palloff & Pratt, 2001; Kim & Bonk, 2006).

Feedback and Evaluation

Clark-Ibanez and Scott (2008) suggested another benefit of online learning is its frequent and timely feedback between teachers and students. This feedback system, substituted for the face-to-face classroom instructions, has made online learning more effective. Taylor (2002) purports that online learning encourages student inter-communication and provides student feedback from their peers as well as from their instructor that makes them feel an integral part of the group. Taylor (2002) states that instructors use course management to obtain results of tests, quizzes, and assignments that show grade to date. This provides each student with immediate feedback.

Growth and Development of Faculty

Appana (2008) reveals that online learning keeps students and instructors up-to-date about new developments in technology and instruction, respectively. Faculty are able to learn new skills for teaching and active student learning (Kyei-Blankson, 2007; Reeves & Reeves, 2007; Tallent-Runnels, et al., 2006). The teaching experience online allows faculty to improve their teaching and force them to rethink the way they deliver instruction, how they assess their students and their role as faculty from sage on the stage to facilitator (Liu, et al., 2007). In addition to these benefits, instructors benefit by participating in students' communication and learning to "provide a scaffold for students' learning with their own knowledge and experience even when they are not immediately involved in a communicative exchange" (Sugar, Martindale, & Crawley, 2007). In addition, working with instructional design personnel enhances faculty ability to design effective online courses that can be transferred into a traditional teaching environment (Conrad & Pedro, 2009; Convington, Petherbridge, & Warren, 2005).

Cost, Affordability, Institutional Benefit

Online learning is highly affordable due to the fact of its cost saving benefits and that most people have access to ICT's in public and private venues (Simpson, 2010; Kyei-Blankson, 2009). Tuition costs can be lower because of the reduced use of physical classrooms and other traditional classroom resources (Jones, 2003). Further, online learning may be a cost effective solution for some universities to continue to provide quality education when finances are tight and physical space and personnel are limited (Davison, 2005; Jones, 2003). Zukas (2000) states that online learning could be

an approach that helps students connect what they learn in school, to what they expect to do in the workplace, and the world around them.

Jones (2003), states that institutions of higher education benefit from online instruction by providing alternatives to the traditional courses. Online instruction helps institutions meet the needs of a fast-paced, computer-literate society. Institutions can maximize their admission of students and minimize building and maintaining schools.

Lastly, Mitchell and Geva-May (2009) and Parthasarathy and Smith (2009) suggests that online learning has the potential to tap into markets, both national and international, that cannot be easily accessed with other more traditional forms of course or program delivery. In addition, they contend that online learning can potentially expand and sustain programs that have been struggling for viable numbers in an on campus version.

Online Learning in Public Health

A shortage in the public health workforce created a need for online learning in public health. Due to this shortage, faculty in public health have been expected to respond to online learning (Duderstandt & Womack, 2003; Escoffery, Leppke, Robinson, Metler, Miner & Smith, 2005, Reeves & Reeves, 2007).

To meet this shortage and focus, online learning has shown to be a viable solution to improving the capacity of the current and future public health workforce (Billot, 2007; Dodd, Laraia, & Carbone, 2003; Edouard et al., 2009; Escoffery et al., 2005; MacDonald, Alexander, Ward, & Davis, 2008; Mokwena, et al., 2007; Umble,

Shay, & Sollecito, 2003; WHO, 2006). However, to date, few online learning studies have been conducted in public health (Billot, 2007; Mokwena et al., 2007).

Online learning in public health and its associated educational academic practices emerged in the mid 1990's with the grant funding from multiple sources. One of the first institutions of public health to embark on online learning was the Johns Hopkins Bloomberg School of Public Health. Bruce, et al. (2007) describes that in 1996 the Johns Hopkins Bloomberg School of Public Health formed a department to concentrate on professional education and public health practice. This department was to transform on-site education for students at a distance by using technologies like the Internet, teleconferencing, interactive computing, audio, and digitized video. As an extension, in 1997, the school facilitated its first distance cohort through the Graduate Certificate Program in Public Health (GCP), a program funded by the Centers for Disease Control. The program required 30% of class work to be completed at the main campus and 70% online. Thirty-six students converged from 22 states, Bermuda, and Uganda. However, as described by Bruce et al. (2007), it wasn't until 1998 when the school's online purview increased to a fully online Master of Public Health Program (MPH).

Umble, Shay, and Sollecito (2003) states that in 1996, University of North Carolina Chapel Hill School of Public of Public Health took steps to develop and implement a distance learning Master of Public Health degree program in public health leadership. The first cohort of learners enrolled in this three-year program in the fall of 1997. Umble, Shay, and Sollecito (2003) stated that learners interacted with professors, teaching assistants, course material, and other learners using the World Wide Web,

weekly two-way videoconferences at seven North Carolina sites, and face-to-face meetings. The program was designed to provide experienced public health practitioners, and other aspiring leaders in health and medical care, with the knowledge and skills needed to lead effective assessment, assurance, and policy development activities. However, as stated by MacDonald, Alexander, Ward and Davis, (2008), the fully online program was not offered until 1998.

As schools and universities explored the Internet's potential, more school of public health sought online learning alternatives to meet educational and workforce demands (Bruce et al., 2007). Stone, Barber, and Potter (2005) profiled earlier work in public health use of online learning for training. This online learning opportunity stemmed from the need to devise a program aimed at training public health professionals in suicide prevention measures, in addition to providing an outlet for those needing suicide prevention services. What they found was that online training was a valuable option to help meet suicide prevention training needs, by employing flexible, easy-to-use, and inexpensive Internet technology. Further, they revealed that with online learning as a growing presence in the field of public health, researcher in public health would continue to develop new courses to improve the ability of professionals and community based coalitions to reduce suicide and its devastating impact on public health.

Billot, (2007) profiled the establishment of a new online educational training program in health promotion and health education. Based on their work with this online health promotion training program, online learning was shown to be an effective

teaching method. In addition, the research conducted on the online training program revealed added value that online learning was responsive to the needs of students.

Edouard et al. (2009) revealed that online learning could facilitate access to training. In 2005, two schools of public health, one in France and one in Benin, began collaborating through contact sessions organized for Nancy University distance-learning students. This experience gave rise to a partnership aimed at developing online public health training materials for African students. The distance-learning public health course at Nancy taught public health professionals through a module entitled “Health and Development.” This module was specifically tailored for professionals from developing countries.

The two collaborating institutions developed a joint distance-learning program geared toward developing countries’ public health professions. The collaboration provided for the development, diffusion, and joint delivery of teaching modules featuring issues that were familiar to the African staff. This gave the French Institute credibility in assessing research, the work produced, and enabled modules on specific African issues and approaches to be put online.

While online learning was found to be a viable educational option for public health professionals, periodic contact was beneficial. Edouard et al. (2009) analysis showed that the benefit of the collaboration between the two institutions was mutual; the French Institute extended its geographical, cultural, and contextual reach and expanded its pool of teaching staff. In addition, the Benin Institute benefited from the technical

partnership and expertise of the collaborative institution, which allowed the institute to offer online learning for Africa-specific contexts and applications.

Limited research in the area of online learning and public health has concentrated on the need of online learning to help alleviate the shortage in the public health workforce and train better quality workers (Bruce, Gresh, Vanchiswaran, & Werapitiya, 2007; Laraia, Dodds, Benjamin, Jones, & Corbone, 2008; IOM, 2003; Rosenblatt, Casey, & Richardson, 2002). Studies conducted by Bruce et al. (2007), Escoffery et al. (2005), Laraia et al. (2008), MacDonald et al. (2008), Umble et al. (2003) concentrate on program evaluation of schools of public health online master of public health programs, specifically how students reacted to the specific online degree programs, its course management, delivery, and learning outcomes leaving out the experience of public health faculty who develop and teach online courses.

Youngblood, Trede, and DiCorpo (2001) in their descriptive study of online learning, paid close attention to the faculty's experience and found that the success of online learning in a public health depended on faculty acquiring new competencies for online teaching, including instructional design, technology tools, and assessment. Further, they found that faculty needed to be aware of technology and how to use it to reach students. They contend that faculty did not need to master technology tools, but learn to advance teaching and learning practices online. Lastly, their study revealed that clear expectations, guided discussions and explanation of assessment criteria, were core components that lead to a successful online learning experience.

Shield (2003) examined the state of online public health education and concluded that faculty will need to rethink their roles as faculty and become facilitators. This author also suggests that course content in public health would need to be redefined to incorporate real life case studies challenges. In addition, Shields (2003) found that online learning and the use technology tools would help build a competent workforce with the ability to deal with real world threats, and reach nontraditional students. Further, this author concludes that with online learning, learning could occur in a workforce setting, expenses aren't needed, and training could take place during the day. Lastly, she contends that both faculty and students will have to explore online learning and consider their learning styles to determine whether online is right for them.

Boerema, Stanley, and Westhorp (2007) suggest that with the advances in technology, health educators are increasingly involved in the delivery of online courses. They found that ongoing tension existed between faculty aspiring to provide high quality, pedagogically sound, interesting, and collaborative online learning opportunities and the workload and time demand of enacting these intentions.

Reeves and Reeves (2007) suggest that increasingly, health and social work educators are joining their colleagues throughout higher education in exploring the possibilities of teaching and learning online. They further suggest that online teaching and learning initiatives have been aided by both proprietary and open source course management systems such as Blackboard and Moodle. However, they assert that faculty in the health and social work context rush to put courses online. They found that faculty in this context were rarely informed by adequate consideration of the affordances of the

World Wide Web to support different types of pedagogical techniques or instructional design methods. Their study revealed that faculty may jump into teaching online without sufficient consideration of the design components that can be implemented in online learning.

Laraia et al. (2008) study looked to assess student retention, readiness, support and outcomes among students completing an online public health program. She cites that online learning is needed to meet workforce demands. Her findings revealed that students in an online public health program were from non-tradition backgrounds and brought high amounts of motivation to the program. She further suggests that students with a support system, both from work and from family become successful in the online environment. However, she states that little is known about the success of online learning distance programs in preparing students to practice public health or in preparing faculty to setup successful distance online programs, making a need to continue to study online learning in the public health discipline.

Further, Edouard et al. (2009) states that few public health online learning experiments have been reported and that as online learning continues, more data is needed to inform online learning practices in public health. Lastly, Reeves and Reeves, (2007) suggests that in order to provide health and social work educators with a richer understanding of the opportunities that online learning afford, it is important to explore the response and experiences of faculty in online learning including barriers, challenges, and benefits associated with online learning.

Theoretical Framework Guiding the Study

The impetus for exploring public health faculty participation in online learning stems from how these faculty engaged in the activities of developing and teaching online courses and the elements that shaped and influenced that experience. These experiences provide the researcher with a rich source of data to explore. In developing this study, two concepts emerged as influential and helped to guide the study. The first was adoption and the second concept experience. This has led the researcher to explore the experience of public health faculty who develop and teach online courses through the lens of adoption and experience. Taken together, this conceptual framework sought to bring meaning and understanding to the elements that influenced and shaped the experience of public health faculty who develop and teach online courses. In order to explore this phenomenon, the Unified Theory of Acceptance and Use of Technology (Venkatesh, Morris, Davis, and Davis, 2003), a leading theory of technology adoption, and the Theory of Experience (Dewey, 1938) were used to guide the study.

Adoption Theory Discussion

According to Straud (2009), adoption theories examine the individual and the choices individuals make to accept, participate, or reject a particular innovation. The author further suggests that in some models, adoption is not only a choice to accept an innovation, but also the extent to which that innovation is integrated into the appropriate context, therefore adoption theories are then, a micro-perspective on change, focusing not on the whole, but rather the pieces that make up the whole.

Fields such as public health, medicine, and health care (Evidence Based Work Group, 2005), sociology (Deffuant, Huet, & Amblard, 2005; Rogers, 1995), education (Hall & Loucks, 1978; Pennington, 2004), and information technology (Venkatesh, Morris, Davis, & Davis, 2003) have used adoption theories to explain and understand how individuals accept and use innovation through contextual, cognitive, and affective factors. Although several research studies seek to understand the adoption process, only a few theories have been widely used in the education literature to analyze technology innovation (Dooley, 1999; Straud, 2009). These theories include the Concerns-Based Adoption Model, Technology Adoption Model, and the Unified Theory of Acceptance and Use of Technology.

The Concerns Based Adoption Model (CBAM) has been used to understand teacher change related to curriculum (Christou, Eliophotou-Menon, & Phillippoyu, 2004) as well as technology change and adoption (Davis & Roblyer, 2005; Dobbs, 2004). In contrast, the Technology Adoption Model (Davis, 1989), and the Unified Theory of Acceptance and Use of Technology (Venkatesh, Morris, Davis, & Davis, 2003), based out of the field of information technology, has been used to answer questions specifically about technology adoption and use. These two prevailing theories have been applied to many educational settings including understanding adoption by student teachers (Ma, Andersson, & Streith, 2005), implementation of laptop-based testing (Baker-Eveleth, Eveleth, O'Neil, & Stone, 2007), and in online learning (Ndubisi, 2006).

Although adoption theories address different aspects of behavioral changes, most share certain commonalities and assumptions. Straud (2009) asserts that the adoption process is not a single event and that beliefs and attitudes relating to the innovation under adoption form over time, thereby influencing decisions and experiences using technology. Although adoption theories have different scopes and perspectives on the change process, a closer examination of their characteristics show that the prevailing theories share three categories. These categories, as suggested by Straud (2009) include individual characteristics, innovation characteristics, and lastly contextual characteristics. According to Straud (2009), individual characteristics include individual differences, state, or trait based characteristics that predispose a person to seek out or shun change. This would include attitudes, beliefs, and the ability to participate in the change. Innovation characteristics are specific to the particular innovation, how easy an innovation is to use, and how the use of an innovation is compatible with the lifestyle of an individual. Lastly, the contextual characteristic involves the environment and surroundings of an individual during the adoption or change process. This is frequently styled as the organizational context.

In this current study the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis and Davis, 2003) and the Theory of Experience (Dewey, 1938) were used to bring meaning and understanding to the elements that influenced and shaped the experience of public health faculty who develop and teach online courses.

Unified Theory of Acceptance and Use of Technology

The literature into the use of technology has identified various technology acceptance models and frameworks for factors influencing individual decisions to participate in an innovation. As early as the 1970s, many models or theories have been proposed and widely discussed to explain users' acceptance of technology and their experience. The most important of these theories are the Theory of Reasoned Action (Fishbein & Ajzen, 1975), the Technology Acceptance Model (Davis, 1989), the Theory of Planned Behavior (Ajzen, 1991), the extended technology acceptance model (Venkatesh, & Davis, 2000), and the most recent Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003). Theories like TAM, TPB and Unified Theory of Acceptance and Use of Technology (UTAUT) all originated from TRA, which explain human behavior from social psychology's viewpoint. The Theory of Reasoned Action (Fishbein & Ajzen, 1975) is very general in nature and tries to explain almost any human behavior. It suggests that social behavior is motivated by an individual's attitude toward carrying out that behavior. An individual's actual behavior can be predicted by behavior intention, which is determined by both the attitude towards a specific behavior and the subjective norm concerning the behavior in question. In other words, behavior is the result of one's beliefs about the outcomes of performing that behavior after evaluating each of those outcomes.

As the Theory of Reasoned Action (Fishbein & Ajzen, 1975) fell short in its applicability to technological innovation, Davis' technology acceptance model (1989) provided more insight into technology use. His theory proposes that perceived

usefulness and perceived ease of use are fundamental factors influencing the user's acceptance as they influence the user's attitude towards a particular technology or system. He defined perceived usefulness as "the degree to which a person believes that using a particular technology or system would enhance his or her job performance" and perceived ease of use as "the degree to which a person believes that using a particular technology or system would be free from effort" (Davis, 1989).

Venkatesh and Davis (2000) extended the original technology model to explain perceived usefulness and usage intentions in terms of the social influence process and the cognitive instrumental processes. The extended model is referred to as TAM2 (Venkatesh & Davis, 2000). In TAM2, the social influence process highlights the impact of three inter-related social forces impinging on an individual facing the opportunity to adopt or reject a new technology or system. These include the subjective norm, which is defined as a "person's perception that most people who are important to him or her, think they should or should not perform behavior in question", voluntariness, and image factor for user acceptance. The TAM2 highlights the individual's job relevance and output quality. Results demonstrate that the ability and perceived ease of use are other fundamental determiners of user acceptance.

In 2003, Venkatesh, Morris, Davis, and Davis (2003) examined eight of the most common theoretical frameworks and models used to understand the individual use and adoption of technology. The theory of reasoned action, the technology acceptance model, the motivational model, the theory of planned behavior, a model combining the technology acceptance model and the theory of planned behavior, the model of personal

computer utilization, the innovation diffusion theory, and the social cognitive theory were all included as previously used constructs. These theories were used to inform organizations about who will adopt and use an innovation most quickly. According to Venkatesh, Morris, Davis, and Davis (2003) these theories were criticized as being fragmented, lacking a cohesive model that accounted for the numerous factors that technology use. Table 2 provides a detailed description of the theories and constructs used to determine the Unified Theory of Acceptance and Use of Technology (UTAUT) model. Venkatesh, Morris, Davis, and Davis (2003) in their study then empirically compared these individual theories through various validation models.

According to Venkatesh, Morris, Davis, and Davis, (2003), the eight theories individually explained 17 to 53 percent of the variation in use of various technologies. The more salient characteristics of the eight models were brought together to form a unified model for understanding technology use and acceptance.

Table 2: Description of Theories and Constructs Used to Determine the UTAUT Model

| Models and Theories | Constructs/Components |
|--|--|
| <p>Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) derives from psychology to measure behavioral intention and performance.</p> <p><i>Applied to online learning Chen and Chen (2006)</i></p> | <p>Attitude</p> <p>Subjective norm</p> |
| <p>Technology Acceptance Model (TAM) by Davis (1989) develops new scale with two specific variables to determine user acceptance of technology.</p> <p>Technology Acceptance Model 2 (TAM2) by Venkatesh and Davis (2000) is adapted from TAM and includes more variables.</p> <p><i>Applied to online learning Ndubisi (2006)</i></p> | <p>Perceived Usefulness</p> <p>Perceived Ease of Use</p> <p>Subjective Norm*</p> <p>Experience*</p> <p>Voluntariness*</p> <p>Image*</p> <p>Job Relevance*</p> <p>Output Quality*</p> <p>Result Demonstrability*</p> <p>* indicates TAM2 only</p> |
| <p>Motivational Model (MM) also stems from psychology to explain behavior. Davis et al. (1992) applies this model to the technology adoption and use.</p> | <p>Extrinsic Motivation</p> <p>Intrinsic Motivation</p> |
| <p>Theory of Planned Behavior (TPB) by Ajzen (1991) extends TRA by including one more variable to determine intention and behavior.</p> <p><i>Applied to online learning Ndubisi (2006)</i></p> | <p>Attitude</p> <p>Subjective norm</p> <p>Perceived Behavioral Control</p> |
| <p>Combined TAM and TPB (C-TAM-TPB) by Taylor and Todd (1995).</p> | <p>Perceived Usefulness</p> <p>Perceived Ease of Use</p> <p>Attitude</p> <p>Subjective norm</p> <p>Perceived Behavioral Control</p> |
| <p>Model of PC Utilization (MPCU) by Thompson et al. (1991) is adjusted from the theory of attitudes and behavior by Triandis (1980) to predict PC usage behavior.</p> | <p>Social Factors</p> <p>Affect</p> <p>Perceived Consequences (Complexity, Job-Fit, Long-Term Consequences of Use)</p> <p>Facilitating Conditions</p> <p>Habits</p> |
| <p>Innovation Diffusion Theory (IDT) by Rogers (1962) is adapted to technology innovations by Moore and Benbasat (1991). Five attributes from Rogers' model and two additional constructs are identified.</p> | <p>Relative Advantage*</p> <p>Compatibility*</p> <p>Complexity*</p> <p>Observability*</p> <p>Trialability*</p> <p>Image</p> <p>Voluntariness of Use</p> <p>* indicates Roger's constructs.</p> |
| <p>Social Cognitive Theory (SCT) by Bandura (1986) is applied to technology by Compeau and Higgins (1995) to determine the usage.</p> | <p>Encouragement by Others</p> <p>Others' Use</p> <p>Support</p> <p>Self-Efficacy</p> <p>Performance Outcome Expectations</p> <p>Personal Outcome Expectations</p> <p>Affect</p> <p>Anxiety</p> |
| <p>Unified Theory of Acceptance and Use of Technology Model (UTAUT) by Venkatesh et al. (2003) integrates above theories and models to measure user intention and usage on technology</p> | <p>Performance Expectancy</p> <p>Effort Expectancy</p> <p>Attitude toward Using Technology</p> <p>Social Influence</p> <p>Facilitating Conditions</p> <p>Self-Efficacy</p> <p>Anxiety</p> |

The Unified Theory of Acceptance and Use of Technology (UTAUT) model includes four key determinants of use, three secondary determinants of use, and four moderators of individual use behaviors. Table 3 presents a description and representation of the models.

The Unified Theory of Acceptance and Use of Technology (UTAUT) theory presented by Venkatesh, Morris, Davis, and Davis (2003) states that four constructs play a significant role as direct determinants of user acceptance and use behavior. These determinants include performance expectancy, effort expectancy, social influence, and facilitating conditions. The authors defined performance expectancy as the degree to which an individual believes that using a particular technology or system will help him or her to attain gains in job performance. Effort expectancy is defined as the degree of ease associated with the use of a technology or system. Social influence is defined as the degree to which an individual perceives how important others believe he or she should use a new technology or system. Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system (Venkatesh, Morris, Davis, and Davis 2003).

In addition, Venkatesh, Morris, Davis, and Davis (2003) suggest three secondary determinants are involved in the Unified Theory of Acceptance and Use of Technology (UTAUT) model.

Table 3: Determinants and Moderators of the Unified Theory of Acceptance and Use of Technology (UTAUT) Model

| Components | Constructs | Description |
|-------------------------------|-----------------------------------|--|
| Key Determinants | Performance Expectancy | The degree to which an individual believes a technology will assist them in performing job duties. This is influenced by previous constructs of perceived ease of use (Davis, 1989) |
| | Effort Expectancy | The degree to which an individual perceives a particular technology to be easy to use (adapted from Davis, 1989) |
| | Social Influence | The degree to which an individual's feels social pressures to use a particular technology, based on the subjective norm from the theory of reasoned actions (Ajzen & Fishbein, 1980) |
| | Facilitating Conditions | The degree to which an individual believes that an organizational and technical infrastructure exists to support use of technology. |
| Secondary Determinants | Attitudes toward using technology | Is defined by the degree to which an individual believes he or she should use a particular technology |
| | Self efficacy | The degree to which an individual's judges his or her ability to use a particular technology to accomplish a particular job or task |
| | Anxiety | Refers to the anxious or emotional reaction associated with the use of a particular technology |
| Moderators | Gender | Male or Female |
| | Age | Continuous Variable |
| | Experience | Prior experience with related technology similar to the technology being adopted and previous experience with the current technology |
| | Voluntariness of Use | Force or willingness to try technology or system based on interests |

These include attitudes toward using technology, which is defined by the degree to which an individual believes he or she should use a particular technology; self efficacy is the degree to which an individual's judges his or her ability to use a particular technology to accomplish a particular job or task; and lastly anxiety, which refers to the anxious or emotional reaction associated with the use of a particular technology.

According to Venkatesh, Morris, Davis, and Davis (2003) these constructs explain up to 70% of the variance in usage intentions. Additionally, the four moderators of individual use behavior that influence adoption include gender, age, experience, and voluntariness. Venkatesh, Morris, Davis, and Davis (2003) states that gender reflects being male or female; age reflects a continuous time variable reflective of the person adopting the technology; experience represents prior interaction and knowledge gained from previous interactions with related technologies similar to the technology under adoption and previous experience with the current technology under adoption. Voluntariness refers to ones participation in using technology as being forced or willing to try a technology or system due to one's on interests.

The Unified Theory of Acceptance and Use of Technology (UTAUT) model, according to Jaajji and Schepers (2006) represents a significant step forward in analyzing behaviors and experience of technology associated with technology adoption, due to the fact that there were no comprehensive models or instruments available to measure or explain the variety of perceptions that influence technology adoption (Venkatesh, Morris, Davis, and Davis 2003). Further, when exploring and analyzing the outcomes of technology adoption experience Venkatesh, Morris, Davis, and Davis

(2003), Cron, Glocum, VandeWalle, and Fu, (2005), and de Vries, Midden, and Bouwhuis (2003) suggest that the Unified Theory of Acceptance and Use of Technology (UTAUT) model provides a platform as to how attitudes towards computers, self efficacy, and computer anxiety play an important role in shaping one's use and experience with technology and whether the experience is positive or negative based on failing or succeeding in one's efforts to participate in a particular innovation. These authors continued to suggest that for some, failing at one's efforts results in negative emotions and future efforts relating to innovation. In reference to technological innovation, which can include online learning, these authors suggest that an individual's failure to successfully learn a technology may induce a negative cycle of non use. This negative cycle may affect self confidence and trust in technology and may have implications for self efficacy when using technology. As the current study seeks to explore the experience of public health faculty who develop and teach online courses, these constructs become important to analyzing the elements that shape the experience of public health faculty who develop and teach online courses.

Because of the model's intricacy and robust comprehensive nature, a full discussion of all the influences in this model is beyond the scope of this study. However, a summary of the key determinants, secondary determinants, and modifiers and their theoretical bases are provided. Refer to Table 3 for a description and representation of the components that for this model. Based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model, personal factors, characteristics of the innovation, and influence of the individual context will shape both the experience

and decision to use technology (Venkatesh, Morris, Davis, and Davis 2003) and this experience is the starting point of understanding the experience of public health faculty develop and teach online courses.

Dewey's Theory of Experience

In his 1938 essay *Education and Experience*, John Dewey, an influential American philosopher and leader of the experiential education movement criticized both the traditional educational model, which was overly concerned with the delivery of pre-ordained knowledge and the progressive educational model, which was concerned with freedom of self expression and individuality. He proceeds to introduce an experience based model, the Theory of Experience. Dewey argues:

We learn from every experience, and if we are to educate, we must learn to educate from an experiential perspective. [We need to] turn education into valued experiences that have positive impacts on individuals so he/she in turn will make a positive contribution in the future. (Dewey 1938).

Dewey (1938) believed that there was an “organic connection between education and personal experience” (p. 25). The primary contribution of the Theory of Experience is the notion of an experience that is both personal and social. He contends that experience has two components, continuity and interaction. Continuity “assumes that every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after” (p. 35). It refers to the fact that previous experiences inevitably effect the current experience. In other words, past events influence the present. These past events in turn, effect future experiences. Dewey

calls this a “domino effect” of experience over time. Dewey (1938) states, “Every experience enacted and undergone modifies the one who acts and undergoes, while this modification affects, whether we wish it or not, the quality of subsequent experience.” Here, according to Dewey (1938) is where the concept of time comes into play in a person’s experience in the continuum of past, present, and future. Nevertheless, Dewey made it clear that continuity also has direction that will affect future experience and that every experience is a “moving force” where “its value can be judged only on the grounds of what it moves toward and into” (p. 38).

The second component of experience is interaction. This refers to the fact that the objective (external) and internal conditions are equally important factors in an experience. This concept is important for Dewey. The former emphasizes only the transmission of external, pre-ordained knowledge and does not consider the internal experience at all. Dewey held that “Experience does not go on simply inside a person... experience has an active side, which changes in some degree the objective conditions under which experiences are had” (p.39). He continued to assert that “experience does not occur in a vacuum. There are sources outside an individual, which give rise to experience” (p. 40). Here, the continuity of experience is affected by both internal and external factors, bringing the social milieu into focus. An individual’s experience is always a particular incident that happened in a specific time and environment. The environment, or “situation” as Dewey termed it, also has an effect on the quality and direction of that experience.

Dewey's theory of experience, therefore, holds that the two principles of continuity and interaction intercept and unites and that "their active union with each other provides the measure of the educative significance and value of an experience" (p. 44). As demonstrated in this study, public health faculty journey into online learning exemplified both an individual continuous experience and a social interactive experience. Taken together, the principles of continuity and interaction means that what individuals may observe or learn from a given experience is influenced both by their prior experiences and by the physical and social settings of the current experience.

In summary, the goal, according to Dewey, is to have experiences that foster and encourage good habits, growth (physical, intellectual, and moral), positive interaction, and knowledge or skills that become instruments of understanding in dealing effectively with situations to come; in this case online learning. In other words, a good experience is a well conceived positive experience, which ensures a positive future experience that leads to the better preparation for life-time appreciation, independence, and development.

Dewey's theory of experience provides useful insights into understanding the experience of public health faculty who develop and teach online courses and any potential learning opportunities that may come from these experiences (Dewey, 1938, p.28). Dewey warns that not all experiences are useful to providing opportunities for learning. He argued that "any experience is mis-educative that has the effect of arresting or distorting the growth of further experience." Dewey believes there are several ways in which prior experience can be counterproductive. Prior experiences, as Dewey (1938)

suggest can cause a lack of sensitivity and responsiveness, which can make people less open to new experiences; in this case, the use of technology. Different experiences may be so disconnected from one another that, while each is agreeable or even exciting in itself, they do not teach us anything. The very disconnectedness of these experiences also runs the risk of artificially generating dispersive and disintegrated habits. Again Dewey's theory of experience can provide useful insight into these matters. By seeing experience as a continuous and highly interactive process of exchange between individuals and their environment, Dewey argues that people assign their own meaning to information. They do so based on what they already know and only retain what is relevant for them. By so doing, they construct their own understanding of reality as a basis for action. Different people will therefore form different interpretations of the same event and may act differently on the basis of the same information. This information will be important as the current study brings meaning and understanding to the elements that influence and shape the experience of public health faculty who develop and teach online courses.

Summary

This literature review was to acquaint the reader with research associated with the history and concept of online learning and the practices of online learning within higher education. The focus of the literature included a discussion on the faculty response to online learning, the role of the faculty in online learning, barriers and challenges associated with online learning, and lastly benefits perceived. An additional section of the literature review outlined online learning in public health and key pieces

of literature that discussed a need to explore the experiences of public health faculty in online learning.

The final section of the literature provided a conceptual framework for guiding the study. Central to the conceptual framework were the emerging concepts of adoption and experience. This has led the researcher to explore the experience of public health faculty who develop and teach online courses through the lens of adoption and experience. Taken together, this conceptual framework sought to bring meaning and understanding to the elements that influenced and shaped the experience of public health faculty who develop and teach online courses using the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003), a leading theory of technology adoption and the Theory of Experience (Dewey, 1938). The next chapter outlines the design of the research study including a discussion on phenomenology research design, data sources, data collection procedures, data analysis techniques, and a profile of the participants who participated in the study.

CHAPTER III

DESIGN OF THE STUDY

The purpose of this study was to research the phenomenon of the experience of public health faculty who develop and teach online courses, by obtaining verbal and written descriptions of their perceptions and experiences developing and teaching online courses in a public health context. From these descriptions, the underlying structures and essence of the experience public health faculty who develop and teach online courses, were extracted by phenomenological analysis as advanced by Moustakas (1994) and Creswell (2007). Three research questions guided this study. The research questions were:

1. How do public health faculty describe their experiences of developing and teaching online courses?
2. What barriers and/or challenges were voiced by public health faculty who develop and teach online courses?
3. What benefits of developing and teaching online courses were shared by public health faculty?

This chapter explains the study's methodology, beginning with a discussion of the research design, an explication of the design, identification of participants, items used to collect data, analysis procedures, and issues of credibility, conformability, ethics, and limitations of the study. The final section contains a profile of the participants.

Design of the Study

Qualitative research, such as phenomenology, is based in a post-positivist theoretical framework. Basic views within this framework are that multiple realities exist, knowledge is socially constructed, and values and biases must be revealed (Creswell, 2007). Qualitative research places emphasis on an attempt to discover and understand interpretations of the social world. According to this tradition, reality is socially constructed and based on people's interpretations.

Qualitative research relies on collecting narrative data through an intense study of a case or cases. The qualitative researcher also attempts to make observations and discover concepts or theories after the data has been collected. Explaining this framework, Creswell (2007) has noted that it leads to research methods that utilize inductive logic and an emergent design.

Although phenomenological research is part of the qualitative research tradition, the phenomenology approach has developed independently from other qualitative designs, therefore distinctive characteristics exist (Creswell, 2007). The phenomenological approach was founded in the philosophy of Edmund Husserl, who suggests that one's experience of a phenomenon is the starting point of knowledge (Creswell, 2007; Moustakas, 1994). The idea of understanding the essence of a phenomenon is key to this type of research. Therefore, the researcher begins with the assumption that underlying essential structures of the phenomena exist and can be extracted from individuals' descriptions of their experiences of the phenomenon.

Experience is central to phenomenology. The purpose, however, is not an attempt to identify the final essence(s) of a phenomenon; it is, as explained by Moustakas (1994), to develop new knowledge that also points to an ever expanding awareness about the phenomenon. New knowledge about the essence of a phenomenon opens “vistas to new journeys for uncovering meaning, truth, and essence— journeys within journeys, within journeys” (Moustakas, 1994, p. 65).

Other characteristics of phenomenology include the researcher guiding participants through a reconstruction of an experience that may be under exploration and is involved in helping the participant describe the experience. Additionally, participants are considered coresearchers, and the primary researcher should, like the coresearcher, have experienced the phenomenon and should also answer the interview questions, providing data as do the coresearchers (Moustakas, 1994). Similar to the primary researcher, the coresearchers are involved in the analysis stage, because member checks are a significant part of the data analysis.

Moreover, the phenomenological approach is concerned with the appearance of phenomena and the way individuals perceive them (Moustakas, 1994). Moustakas (1994) summarized the philosophy’s main premise, stating, “Husserl’s transcendental science offers a carefully developed conceptual model that brings the person into focus as the necessary source for explicating experience and deriving knowledge” (p. 48). Phenomenological researchers attempt to uncover, understand, and depict an underlying structure of shared experience or meaning—the underlying essence. Essence “means that which is common or universal, the condition or quality without which a thing would not

be what it is” (Moustakas p. 100). To discover the essence of a phenomenon, the researcher analyzes rich and thick descriptions of the phenomenon given by coresearchers (Creswell, 2007; Moustakas, 1994). According to Moustakas (1994) this is crucial, because from a phenomenological viewpoint, “scientific investigation is valid when the knowledge sought is arrived at through descriptions that make possible an understanding of meanings and essence of experience” (p. 84).

This methodology is appropriate for this particular research study because little is known about the lived experiences of public health faculty who develop and teach online courses (Edouard, Billot, Moussiliou, Francis, Khaled, & Serge, 2009; Laraia et al., 2008). The phenomenological design was best suited to address this need, due to the fact that the approach allowed the researcher to extract the essence of developing and teaching online courses from the perspective of the public health faculty. Another major reason why this approach was used was due to the fact that, according to Creswell (2007) and Moustakas (1994), this approach is appropriate when the primary researcher has personal experience of the phenomenon. Indeed, the researcher should, ideally, be passionate about the research phenomenon and questions posed regarding it. The primary researcher for this study has a substantial amount of experience developing and teaching online courses. Furthermore, as an online instructor and a trainer for new online course instructors, the researcher possesses an interest in the study’s topic. Though other research methods view these characteristics as limitations that create problems with objectivity, the phenomenological methods view these characteristics as strengths because “personal history brings the core of the problem into focus” (Moustakas, p.

104). Finally, phenomenology was used due to the noticeable lack of phenomenological studies about online learning in the public health literature (Edouard et al., 2009; Escoffey, 2005; Laraia, et al. 2008). In particular, limited phenomenological studies existed, exploring or investigating the online learning experienced by faculty (Chen & Chen, 2006; Concecao, 2006; Edouard et al., 2009; Mokgatle-Nthabu, Madiba, Lewisa, & Ntuli-Ngcoboa, 2007) and none existed for public health faculty. This suggests a significant gap in knowledge that needed to be filled by phenomenological design. Therefore, due to the potentially significant contributions that a phenomenological study can offer to the literature and due to the characteristics of the primary researcher, phenomenology was the most appropriate research design for the study.

The specific phenomenological techniques and procedures that were employed for the study have been articulated by Moustakas (1994). The procedures were used to guide the researcher in preparation, collection, and analysis of the data. In explaining the procedures, Moustakas (1994) emphasized the importance of seeing and explaining phenomena without bias: “This way of perceiving life calls for looking, noticing, becoming aware, without imposing our prejudgment on what we see, think, imagine, or feel” (p. 86). In summarizing the purpose of the procedures, Moustakas stated, “The challenge is to explicate the phenomenon in terms of its constituents and possible meanings, thus discerning the features of consciousness and arriving at an understanding of the essence of the experience” (p. 49). To accomplish this, three major processes were undertaken. These major processes include epoche, phenomenological reduction,

and imaginative reduction. In general, these processes required the primary researcher to:

1. Bracket assumptions regarding the phenomenon;
2. Analyze verbal or written data to discover emergent themes;
3. Uncover clusters of themes and;
4. Prepare a creative description of the phenomenon that articulates its underlying structures and essence as depicted from the themes discovered in the data.

At key points in the analysis, participants were given the opportunity to check the primary researcher's comprehension and interpretation of the data.

Identification of Participants

As recommended for most qualitative research, purposive (criteria) sampling was used to identify participants (Creswell, 2007; Ritchie & Lewis, 2003) who experienced the phenomenon being investigated. In this sampling approach, participants who possessed particular characteristics and met certain criteria were selected in order to allow the primary researcher to explore and understand the research topic. Sampling remained consistent with Moustakas's (1994) criteria for locating and selecting participants. The purposive criteria to select the participants were the following:

1. Developed and taught an online course at a school of public health;
2. Was interested in understanding the nature and meaning of how public health faculty develop and teach online courses;

3. Was willing to participate in a one hour digitally recorded interview and written narrative protocol; and
4. Granted the researcher the right to publish data in a dissertation and other publications.

The study also followed Ritchie and Lewis's (2003) recommendation that the researcher attempt to achieve diversity in the research sample. According to their suggestion, the researcher should ensure that some diversity is included so that the impact of various characteristics might be explored. Although the faculty makeup of the school in the context of this study is homogeneous (i.e. racial background), division and course classification was used to provide diversity of participants. To identify the emergent diversity and understand the participant's contextual environment, demographic information was gathered by having the participants complete a demographic information section within the interview process, detailing which division they teach in, as well as the identification of courses they taught. This information was used to explain the findings of the study and to describe the school where the participants developed and taught online courses.

In order to obtain narrative and interview data, a criteria sampling technique as suggested by Ritchie and Lewis (2003) was used. After the Institutional Review Board (IRB) approval was granted from Texas A&M University, the Institutional Review Board (IRB) at the research site institution was contacted to ascertain whether approval would be needed at the institution to interview the study participants (Creswell, 1998).

Since approval was granted by the Institutional Review Board at Texas A&M University, permission was not needed from the research site institution.

Although no formal gatekeeper was needed for this study (Richardson et al., 1965 as cited in Seidman, 1998), an informal gatekeeper, the Associate Dean of Outreach Programs was contacted via email and used in this capacity. The Associate Dean of Outreach Programs created the first public health online certificate program in the state, where this particular school of public health was located, in response to the recommendations of the Task Force on the Future of Public Health report. The Associate Dean also has great insight into the organization, having served in various administrative capacities for over 15 years. This person understood the organizational, political, and social structures, as well as the online teaching and learning environment that existed at this particular school of public health. At this school of public health, the Associate Dean of Outreach Program can be defined as the organization administrative unit designated by the institution to provide, support, and facilitate distance education programs and activities that promote public health education and outreach.

The person who served in this capacity was contacted via email and asked to provide the names of the faculty who developed and taught online courses between Spring of 2006 (the beginning of when the online courses were offered) until the end of the Spring 2009 semester, for participation in the study. Based on the faculty who developed and taught online courses, an excel spreadsheet of seventy potential participants was acquired from the Associate Dean of Outreach Programs. This list of potential participants reflected all faculty who taught online at this particular School of

Public Health from 2006 until the end of the 2008-2009 academic year, including repeat sections over the three-year period.

With the assistance of the Associate Dean of Outreach Programs, the list of seventy entries was narrowed down to public health faculty who developed and taught online from spring 2006 until the end spring of 2009. All repeated course sections and faculty associated with those courses were deleted from the list, leaving a short list of twenty nine potential candidates. From that shorter list, a sample was derived by seeking faculty from different divisions within the school who developed and taught online courses. The list was sorted according to divisions (Biostatistics, Environmental and Occupational Health Sciences, Behavioral Science and Health Promotion, Management Policy and Community Health and Epidemiology).

The faculty who developed and taught online courses from the Spring 2006 until the end of the 2008-2009 academic year included 19 females and 10 males. The list was then further narrowed down by consultation with the Associate Dean of Outreach Programs as to who still remained as faculty at this particular school of public health. Of the 29 faculty who develop and taught online courses from the Spring 2006 until the end of the 2008-2009 academic year, one faculty had since left and was no longer associated with this particular school of public health, leaving a potential population pool of 28 faculty to participate in the study, eighteen female and ten males representing each of the divisions (Behavioral Science and Health Promotion, Biostatistics, Epidemiology Environmental and Occupational Health Sciences, Management, Policy and Community Health).

The faculty who remained represented over 30 years of public health education experience. Their years of experiences in public health education, their work in the field, and their innovativeness to develop and teach online courses made them unique for this study.

Using the contact information provided by the Associate Dean of Outreach Programs, potential participants were contacted via email, phoned, and sent invitation letters inviting them to participate in the study (Seidman, 1998). Of the twenty-eight faculty contacted to participate in the study, five replied to participate. The purpose of the study along with an overview of the interview and narrative process was explained via email and by phone. Interview dates, times, and locations were determined by the participants based on their schedules. Once the participants accepted the invitation to participate in the study, a copy of the study's informational sheet was sent to them via email. This informational sheet explained the scope of the study and the participant's involvement. Once the participants responded back with their consent to begin, the data collection process began.

Though the exact number of participants was determined during the process of analysis as part of the emergent design, the researcher anticipated interviewing approximately five participants. Creswell (1998) has recommended "up to 10 people" for a phenomenological study (p. 65, 113, & 122), and Babbie (cited in Groenewald, 2004) has suggested two to ten participants as sufficient. Moustakas (1994) states that research participants should be kept to small number in order to capture and fully grasp the quality of essence of the phenomenon under investigation. The exact number to be

involved was determined by the responses to the researcher's inquiries and the final number was based, as recommended by Babbie (cited in Groenewald) and Schwandt (cited in Groenewald), on the researcher's judgment and the purpose of the research. The researcher's judgment regarding this was based on reaching a point of saturation of data in the interview process, at which point, as defined by Seidman (1991), "the interviewer begins to hear the same information reported and he or she is no longer learning anything new" (p. 45). With five participants for this study, the researcher attained a point of data saturation.

Methods of Collecting Data

In order to capture the experience of public health faculty who develop and teach online courses, a variety of methods of collecting data were used to obtain data.

According to Creswell (2007), the following data collection methods should be used:

1. Written narratives;
2. Oral interviews;
3. Interview notes; and
4. Artifact examination.

Written Narratives

Written narrative data were solicited from the personal experiences of public health faculty involved in the phenomenon of developing and teaching online courses. This took place via email. The narratives were written by public health faculty to answer the following questions:

1. How would you describe your experiences developing and teaching online courses at this school of public health?
2. While in the process of developing and teaching online course (s) did you encounter any barriers or challenges? If so, what were they and how did you overcome them?
3. What recommendations would you offer to university administration and to other faculty based on your experiences to support ones' efforts to develop and teach online courses at this particular school of public health?

The principal goal of these narratives were to address the need for public health faculty to provide an ongoing discussion of their experiences developing and teaching online courses, so that university administration and other faculty could understand how faculty develop and teach online courses and the multiple forms of resistance, hindrances, influences and facilitators faculty may encounter as part of their daily efforts in achieving these objectives. This qualitative component gave voice to faculty and provided a forum where faculty could express their innermost feelings on the subject at hand.

Interview Protocol Development

In order to generate a comprehensive portrait of the experience of public health faculty who develop and teach online courses, an interview protocol was developed to address the research questions and to outline key questions that were asked of each participant (Creswell, 2005). Interview questions addressed the formal and informal process, activity, and experience of public health faculty who develop and teach online

courses. Since the goal of the interview was to understand the faculty's point of view on their experience developing and teaching online courses within the context of a school of public health, the interviews were a mix of semi-structured and open-ended questions.

Though the interviews were semi-structured in order to allow data to emerge, the interview guide was a major instrument for data collection (Moustakas, 1994; Creswell, 1998). Moustakas (1994) has advised that the investigator prepare an interview guide with the understanding that changes and adjustments may need to be made as the interviews take place.

The interview guide was used to gather and study professional and technical background data on how public health faculty carried out the development and teaching of online courses, their perceptions and beliefs about developing and teaching online courses, what they learned, and their interactions with objects (people, activities, and technology) during the process. Central to this component was to capture the experience and thinking about developing and teaching online courses.

The interview protocol was divided into three sections with a total of 19 questions:

1. Background information, which contained three main questions and eight sub questions that described the participants' backgrounds in public health, the subject matter they taught, their feelings, motivation, expectations, and journey for developing and teaching online courses.
2. Description of the process and experience of developing and teaching online courses, which consisted of thirteen questions that delved into the experience of

public health faculty who developed and taught online courses and the activities that supported such achievement. In addition, this section also inquired into the faculty experience in a traditional educational setting and challenges they face transitioning to an online environment, how they interacted with those challenges, what they learned during the process, and their perceptions and beliefs while navigating through the process. Further, this section allowed faculty to delve into the experience of how they developed and taught online courses, their motivation for developing and teaching online courses, and their thoughts concerning the overall process.

3. Additional support provided by the institution was a third section. This consisted of three questions that allowed public health faculty to provide information on additional assistance and support afforded to them from institutional leadership that would enhance their online course development and teaching experience. In addition, participants were invited to make recommendations to novice faculty who wish to start the process of developing and teaching online courses in a school of public health setting. The last phase of the interview protocol allowed faculty the opportunity to provide additional comments about their experiences in developing and teaching online courses.

These questions were adapted from suggestions by Moustakas (1994) and questions used in a phenomenological study conducted by Riemen (cited in Creswell, 1998). While allowing for flexibility, the interview guide served as a memory aid to help the researcher elicit a full description of the participants' experience.

Interview questions were reviewed by two co-chairs of the dissertation committee, as well as by the Associate Dean for Outreach Programs at this particular school of public health. Revisions were made accordingly. The interview protocol was pilot tested with an Environmental and Occupational Health Sciences faculty in the EOHS division at the institution's research site and by an Instructional Technology professor from another institution not included at the research site. Both professors possess extensive experience in qualitative research, particularly with interviewing procedures. Additionally, a curriculum specialist from a local school district, who has extensive experience in interviewing and linguistic transcription reviewed the protocol and submitted recommendations for improvements. Changes were made accordingly. A total of six people reviewed and gave feedback on the interview protocol.

Artifact Review

According to Creswell (2007), reviewing artifacts can provide additional insights into ones study and provide a broader perspective concerning participants within the study. As part of the study, participant's online courses and any comments students produced in response to these course were reviewed. Their course syllabus was also reviewed. These artifacts provided supporting data and a broader perspective concerning the experience of public health faculty who developed and taught online course at this particular school of public health, including what technology tools were used, navigation structures, graphic design, aesthetics, and overall course and instructional design.

Each data collection item was used to generate a profile portrait/narrative of the public health faculty who told their story and highlighted their lived experience developing and teaching online courses (Creswell, 2007). Further, written narratives, observations/field notes, and artifacts were used in a supporting role to support the themes generated from the interview data (i.e. corroboration or refutation of interview data, hence triangulation).

Specific Procedures for Collecting Data

A crucial step in the data collection process was the epoch process. This process was to be completed first by the researcher before the data collection process could start. The process of epoche, as explained by Moustakas (1994), involved the researcher identifying and releasing preconceptions, judgments, and assumptions about the phenomenon that is being investigated. This process allowed the researcher to look at the phenomenon with a fresh mind, to see it as it is without projecting ideas onto it (Moustakas, 1994). During this process, I released what has been known or perceived about the phenomenon in order to see “freshly, naively, in a wide open sense, from the vantage point of a pure or transcendental ego” (Moustakas, p. 33). Creswell (2007) has suggested that I accomplish this task by answering the questions designed for the interviews. Therefore, the first step in the data collection process was for the researcher to complete the epoche bracketing process, by writing a narrative that described his experience of developing and teaching online courses, answering in explicit detail the questions prepared for the interview guide and the written narrative protocol. In completing the narrative, the researcher identified biases regarding the phenomenon in

order to bracket them during the completion of data collection and analysis. The identified biases were also noted in Chapter I, when discussing assumptions and limitations. Once this process was completed, the data collection process began.

Data collection took place in two parts. First, the narrative data was schedule to be conducted over a 30-day (four weeks) period, based on the participant's schedule. Over the course of the 30 days (four weeks), each participate was contacted via email with an invitation to participate. Following the invitation email and the acceptance reply, the written narrative protocol prompt along with the directions was forwarded via email. Participants had 30 days (4 weeks) to complete the written narratives and to return the document back to the researcher electronically via email. Prior to the start of each narrative email, participants were provided with an informational sheet to review. The procedures outlined in the informational sheet were based on guidelines determined by the Institutional Review Board at the Texas A&M University. After the informational sheet was given, which outlined the need for the narrative (Creswell, 1998); each participant verbally verified his or her permission to have their narratives included in the study. Narratives were completed by the participants based on their personal experiences with the phenomenon (Creswell, 2005). The narratives helped preserve and cross-check information provided during the qualitative data collection process (Vockell & Asher, 1995; Creswell, 2005; Boyatzis, 1998).

Once the narratives were collected from the participants via email, the participants were emailed to schedule an interview session. Interviews were scheduled to be conducted over a 30-day period, based on the interviewee's schedule. Over the course

of the 30-day period, visits were made to the institution to conduct in-depth interviews. Prior to the start of each interview, participants were provided with an informational sheet to review. After the informational sheet, which outlined the need to digitally record the interview (Creswell, 1998), consent was given and each participant verbally verified his or her permission to have the interview recorded. The researcher memorized the interview guide questions in order to maintain eye contact with the participants. During the interview process, the researcher, having identified potential biases during the epoche process, bracketed or set aside prejudgments on issues regarding the phenomenon. The interview began, as recommended by Moustakas (1994), with “a social conversation or a brief meditative activity aimed at creating a relaxed and trusting atmosphere” (p. 114). The goal of interviews were to collect data in order to understand each person’s experience developing and teaching online courses at a school of public health.

Following this, the researcher asked participants to focus on the experience of the phenomenon and to describe it fully. Questions in the interview guide (see the above Instrumentation section) were used to facilitate the interview and elicit a detailed and vivid description of the experience. The researcher composed descriptive field notes during the interview and composed reflective journal notes immediately following the interview (details regarding this are given below). Interviews were digitally recorded because of the potential length of each interview and because of the need for accuracy during the data analysis process (Creswell, 2005).

For participants located at the regional campuses (i.e. Austin, Brownsville, Dallas, El Paso, and San Antonio), interviews were digitally recorded via a two way web video conferencing program called VSEE. VSEE is a videoconferencing real-time collaboration service. Its primary benefits include high quality resolution, low bandwidth, and the availability to record video interview sessions. The VSEE program runs on a Windows platform and connects over the Internet to a host. Communication travels peer-to-peer. This allowed for real time video conferencing and interview recording. The sessions via VSEE followed the same protocol as with the digital recorded face to face interview sessions. Once the interviews were completed via VSEE, the data was saved to the laptop, coded, and labeled appropriately to ensure confidentiality of the participants.

Both the face-to-face interview and video conference interview lasted an average of 1 hour. During each interview, notes were recorded based on the participants' responses to each interview question. After each interview was completed, the recorded sessions were digitally transferred from the digital recorder to a laptop and encrypted with an encryption password. To ensure anonymity and confidentiality, the researcher was the only person with access to the files and to the laptop. In addition, to increase anonymity and confidentiality, and any other potential risks to the participants, the interviews were conducted in locations determined by the interviewees at dates and times determined by each interviewee (Seidman, 1998). Saving data to the laptop allowed the data to be transcribed. Transcripts of the interviews were generated to help

preserve and cross-check information provided during the interviews (Vockell & Asher, 1995; Creswell, 2005; Boyatzis, 1998).

At the conclusion of each interview process, each participant was provided with a \$10 gift card to the Barnes and Noble Bookstore for participating in the study. The gift cards were kept at a nominal amount to prevent any potential bias of the participants' reasons for participating in the study (Creswell, 2005). Participants were made aware of the compensation in the informational sheet prior to the start of the interview. They were, however, unaware of this compensation prior to agreeing to participate in the study. If participants withdrew from the interview, compensation for participating in the study was still provided. However no one withdrew from the study.

Two other data collection methods were used including, field notes and a researcher's journal. Both were used to triangulate the data, allowing for corroboration of data, a deepening of understanding of the data, and reduction of researcher bias. The field notes consisted of observational notes taken by the researcher during the interview sessions and from the participant's online courses. The researcher made descriptive notes regarding the setting, the participants' mannerisms, any interruptions, and any technical difficulties experienced with the recording equipment as well as the construction, design, and layout of the online courses. Further, time was taken to review student comments and evaluations concerning the online course. The researcher's journal consisted of descriptive and reflective notes made by the researcher immediately following the interviews and made during the analysis stage of the study.

Relevant excerpts from the field notes and journal are included as an appendix to the study in order to increase transparency in the researcher's thought process and give others a better view into the researcher's methods and procedures (see Appendix A). The field notes and the journal were written in separate electronic files. The researcher's field notes and journal were, like the digital recorded files and transcripts, assigned code names to ensure participants' confidentiality.

Methods of Phenomenology Analysis

This study employed two different analysis techniques. The written narrative, artifact and interview observation notes data, were analyzed using the inducted grounded analysis technique (Blasé' & Blasé', 1999) to analyze, code and write the data to reduce the data into manageable pieces that could be searched and mined for themes (a priori and priori). This means that the categories, themes, and patterns emerged inductively from the data. Similarly to the phenomenological research design, the researcher:

1. Found non-repeating significant statements;
2. Made a list of these significant statements;
3. Themed and categorized the statements; and
4. Described the themes that emerged.

Analyzing the interview data were consistent with the phenomenological research design based on the Stevick- Colaizzi-Keen Method as advanced by Moustakas, (1994) and Creswell, (2007 p. 59). This was an ongoing process that began after the researcher engaged in the epoche process (Creswell, 2007). Therefore, analysis of the data began early in the process, while data collection continued.

This method, frequently employed by phenomenological researchers (Creswell, 2007) began with the epoche process of bracketing. In accordance with this approach, the researcher answered all of the interview guide questions and prepared an electronic transcription of the responses. Biases were identified and recorded in the researcher's journal (Appendix A). Next, the researcher conducted the analysis for his personal account of the phenomenon that was described during the epoche process. After that, the researcher repeated the steps for each of the individual participant, as their interviews were transcribed and confirmed by them for accuracy. The two major steps for data analysis included phenomenological reduction and imaginative variation. In summary, during the phenomenological reduction stage, the researcher:

1. horizontalized data by creating non-repetitive descriptive statements;
2. clustered themes from the horizontalization; and
3. created a textural description of *what* was experienced.

For the imaginative variation stage, the researcher:

1. considered all possible variations of the experience;
2. created a structural description of *how* it was experienced;
3. synthesized the textural and structural descriptions to create a textural-structural description; and
4. conducted member checks.

After the above processes were completed for each individual interview, the researcher created a composite of all of the (a) horizons, (b) themes, (c) textural

descriptions, (d) structural descriptions, and (e) textural-structural descriptions.

Participants conducted final member-checks of the data at that point.

To explain in further detail, phenomenological reduction, as discussed by Moustakas (1994), began with a horizontalization of the data. To complete this process, the researcher read and re-read the transcription of an interview in order to clearly understand the experience described. In reading the transcript, the researcher sought to discover and list significant statements from the interview that described the participant's experience of the phenomenon. During this stage, the researcher treated each statement with equal worth, developing a list of "nonrepetitive, nonoverlapping" statements that related to the topic (Moustakas, p. 122). Moustakas referred to the statements as the "invariant horizons or meaning units of the experience" (p. 122). These statements identified "horizon[s] of the experience" (Moustakas, p. 121), allowing the researcher to see further and know more about the participant's experience.

In the next phase of phenomenological reduction, described by Moustakas (1994), the researcher clustered the invariant horizons identified during horizontalization into themes. These clusters of themes represented descriptions that emerged from and were common to all of the data. From this, the researcher created a "textural description" by synthesizing the themes and writing a description of the textures of the experience, including verbatim examples from the interview (Moustakas, p. 96). In completing this stage, the researcher made journal entries (see Appendix A) to help maintain "clear reflectiveness", (Moustakas, p. 93), which is required for the phenomenological reduction stage.

The second major stage in the analysis is known as imaginative variation. The goal of this phase, according to Moustakas (1994), “is to seek possible meanings through the utilization of imagination. The aim is to arrive at a structural description of an experience, the underlying and precipitating factors that account for what is being experienced” (p. 98). To fulfill this aim, the researcher considered all possible variations regarding the phenomenon. Diverse perspectives, various frames of reference, and different functions or roles regarding the phenomenon were imagined and considered. As earlier, journal entries (See Appendix A) were completed during this process to aid the researcher and to make the researcher’s thought processes more transparent. From the information gathered during this phase of analysis, the researcher composed a structural description of how the phenomenon was experienced, providing “a vivid account of the underlying dynamics of the experience” (Moustakas, pp. 98, 135). This represents regularities found in how the participant experienced the phenomenon.

After completing the structural description, the researcher synthesized the description composed during the phenomenological reduction stage and the description composed during the imaginative variation stage in order to construct a “textural-structural description of the meanings and essence” of the phenomenon (Moustakas, 1994, p. 122). A member-check was conducted at this point and confirmed the accuracy of the researcher’s analysis.

After the researcher completed this stage of the analysis for all of the participants, a composite was created for the a) individual horizons, b) individual clustered themes, and c) individual textural-structural descriptions. As with the

individual data analysis, the participant reviewed the composite analysis and confirmed its accuracy. Finally, the researcher utilized the composite data to answer the stated research questions.

Credibility, Confirmability, and Transferability

Though it is inappropriate to hold a qualitative study to measures related to reliability and validity dictated by quantitative research designs, qualitative researchers remain earnest in developing and demonstrating quality and sustainable methods and results. Because traditional tests or measurements are not recommended for qualitative research, the terms of reliability and validity are rarely used; instead, Lincoln and Guba (1985) have suggested terms such as credibility and confirmability. Merriam (1998) suggest terms such as transferability and credibility. The researcher took several steps to ensure credibility, confirmability and transferability for this study.

First, a bracketing of prejudices was made during data collection and analysis. The epoche process, as suggested by Moustakas (1994) and Creswell (2007), was utilized to assist with bracketing. The researcher accomplished this by answering all questions in the interview guide and in the written narrative protocol. Then the researcher identified biases, recorded them in the researcher's journal (Appendix A), and sat them aside during data collection and analysis. Secondly, as suggested by Creswell (2007), data were confirmed through the triangulation of sources, including in-depth interviews, a written narrative protocol, artifact analysis, observational field notes, and the researcher's reflective journal. The written narrative protocol, artifact analysis, observational field notes and journal (Appendix A) allowed the researcher to corroborate

data from the interviews, and assist with the identification of patterns and themes that emerged from the data. The researcher also has made relevant sections of the notes and journal available in the appendix in order to create a transparency of the thinking process that guided the analysis. This helped create credibility and confirmability, as advocated by Lincoln and Guba, (1985), due to the fact that it allows others the opportunity to confirm the conclusions reached by the study.

Another way the researcher promoted credibility, confirmability, and transferability, was suggested by using Merriam's (1998) six strategies and confirmed through Moustakas (1994):

Triangulation – The study used triangulation methods of qualitative research by using multiple investigators, multiple sources of data, and multiple methods to confirm emerging findings. This study employed data collection techniques of written narrative, interview notes, artifact examination and interview data.

Member checks – The study used member checks to take data and interpretations back to the people from whom they were derived and asking if the results were plausible. This was achieved by allowing the participants to review results of the phenomenological reduction and imaginative variation stages of data analysis (Moustakas, 1994).

Participants were asked to make corrections as needed in order to confirm the meanings and interpretations assigned to their interviews.

Long-term Observation at the research site or repeated observation of the same phenomenon gathering data over a period of time. This was accomplished by the researcher building rapport with participants, visiting and spending time in a pre-

meeting, conducting a one hour in-depth interview, and maintaining contact with the participants throughout the duration of the study.

Peer examination – The study used peer to ask colleagues to comment on findings as they emerge.

Participatory modes of research – This strategy was used to involve participants in each phase of the research study.

Researcher's biases – This involved the divulging of information about one's self, in relation to the study including one's epistemological views and values of the subject. This was achieved via the epoche process, as suggested by Moustakas (1994) and Creswell (2007). This assisted with the bracketing process. The researcher accomplished this by answering all of the questions in the interview guide and in the written narrative, and then, identified his biases, and recorded them in a researcher's journal

Although the results of the study cannot be easily generalized to a larger population, rich, thick descriptions were accomplished by in-depth interviews and written narratives to allow others to more easily reflect on how the results relate to their own experiences and settings. With the six strategies described above, the researcher ensured credibility, confirmability and transferability of the study.

Confidentiality and Ethical Considerations

Several steps were taken to maintain high ethical standards in the study. The researcher provided potential participants with an informational sheet that explained the nature of the study, its purposes, and their role in it. The letter also explained their right

to confidentiality and their right to withdraw from the study at any point in time.

Because the data involved in this study was of personal experiences, testimonies and realities of the participants, all of the identifying information was removed prior to the release of data to researcher.

The researcher ensured confidentiality by assigning a code name to each participants and using it to label the transcripts, field notes, journal entries, and to discuss the study's results. When participants conducted the member checks, the data did not contain any information that allowed them to know who other individual participants were. To ensure that the participants understood the study's purpose and their role in it, they were asked to read the informational sheet before the interview or the written narrative process began. In addition to explaining the study, confidentiality, and the participants' role, the informational sheet also granted the researcher the right to publish the dissertation in print or in electronic form on the Internet.

To further enhance confidentiality, any remaining identifying information was removed and pseudo names/codes were given in place of identifying information. The observation, narrative and interview data were kept locked in 128 bit encrypted key and was not be given to anyone, but the researcher. After a lapse of six months, all raw data was shredded and discarded.

To further promote ethics in the study, the researcher completed CITI Program requirements for the Basic CITI Course in the Protection of Human Research Subjects, and attained approval from the institutional review board before collecting data for the

study. These measures ensured that federal codes regarding the protection of human subjects were met by the study.

Limitations

A phenomenological study, like all qualitative research, relies on data that cannot be readily quantified in a manner that allows it to be generalized and applied to other situations and populations. However, the qualitative data presented in this study, provides for transferability. Additionally, the small sample size and the non-random selection of participants necessitated by qualitative research limits the findings from being generalized. Though the findings of the study may not be easily generalized to a larger population, measures, as described above, were taken to create confirmability, transferability, and assist others in considering how the study's results may apply to different populations.

Profile of Participants

The study sample consisted of five public health faculty who developed and taught online in a school of public health setting. At the time of the interview, the participants were full-time faculty at a particular school of public health. Three of the participants were at schools located at the southwest main campus. Two of the participants were full time faculty at regional campuses. All of the participating faculty lived in the southwest region of the United States.

Two of the participants were female; three participants were male. All of the participants were European Americans. The age range of the participants ranged from 53 to 70. The number of online graduate courses developed and taught at this particular

school of public health was 29. However, these 29 courses were taught multiple times from the spring 2006 to the spring of 2009 for a grand total of 70 separate online course offerings. Additionally, all of the faculty were full time faculty, however four held administrative positions. Two were Regional Deans; one was an Associate Dean; one was a Division Director; three taught at the main campus, while two taught at regional campuses. The number of years in the teaching profession ranged from 25 to 40. Additionally, five of the participants had taught courses in an online environment; the number of online courses taught ranged from 1 to 8. The number of years teaching online ranged from 1 to 4 years. All of the participants said that they plan to teach online courses in the future. Two of the participants specialized in Environmental and Occupational Health Science, one in Epidemiology, one in Biostatistics, and one in Behavioral Science and Health Promotion. A summary of the profile information is presented in Table 4. To provide more detailed profile information, a profile portrait for each participant, using pseudonyms to ensure anonymity and confidentiality is provided.

The Participants

Dr. BIO01 Profile

Dr. BIO01 is a 70year old European American male, who works in the Division of Biostatistics, at a school of public health located in the southwest region of the United States. He is a Full Professor of Biometry and the Past President of the American Public Health Association. At the time of the interview, he has taught for a total of 40 years, four of which has involved online teaching.

TABLE 4
Profile of Study Participants

| <i>Pseudonym</i> | <i>Faculty Status</i> | <i>Administrative Capacity</i> | <i>Age of Participant</i> | <i>Academic Discipline</i> | <i>Years of Experience Teaching</i> | <i>Years of Experience Teaching Online</i> | <i>Communication Technology</i> | <i>Number of Learners per Course</i> | <i>Course Length</i> | <i>Location</i> |
|------------------|-----------------------|--------------------------------|---------------------------|--|-------------------------------------|--|---------------------------------|--------------------------------------|----------------------|-----------------|
| BIO01 | Full Professor | None | 70 | Biostatistics | 40 | 4 | Blackboard | 50 | 15 weeks | Main Campus |
| EPI02 | Full Professor | Regional Dean | 55 | Epidemiology | 35 | 1 | Blackboard | 20 | 8 weeks | San Antonio |
| EOHS03 | Full Professor | Division Director | 53 | Environmental Occupational Health Science | 25 | 1 | Blackboard VSEE Skype | 20 | 15 weeks | Main Campus |
| EOHS04 | Associate Professor | Associate Dean | 65 | Environmental Occupational Health Sciences | 36 | 4 | Blackboard VSEE | 50 | 15 weeks | Main Campus |
| HPBS05 | Full Professor | Regional Dean | 60 | Health Promotion Behavioral Sciences | 30 | 1 | Blackboard | 30 | 15 weeks | Austin |

Dr. BIO01 has research interest in health services research, utilization analysis, health survey methodology, technology assessment, policy applications, health technology assessment, and health information systems. His central message throughout his public health career has been one that emphasizes connecting people to public health, strengthening the membership of the association, forging ahead with new strategic alliances, and engaging the next generation of public health professionals.

Dr. BIO01 has a delightful personality that is filled with energy. He is optimistic and enthusiastic when it comes to innovation. He is a true innovator and a free spirit. He resides in the southwest region of the United States, teaches online, and currently has a public health collaborative with China and Dubai, where he provides consultation and policy administration for public health initiatives for developing nations.

Dr. EPI01 Profile

Dr. EPI01 is a 55 year old European American female, who works in the Division of Epidemiology at a school of public health, located in the southwest region of the United States. She is a Full Professor of Epidemiology and Regional Dean located at a branch campus at this particular school of public health, in the southwest region of the United States. She received her MS and PhD in Biostatistics and Epidemiology, respectively. As a public health educator, she brings over 30 years of teaching experience, one of which has involved online teaching. In addition to her teaching experience, she has served as chair of the Department of Epidemiology and Biostatistics and Assistant Dean of Academic Affairs at a school of public health located in another part of the southwest area of the United States.

Dr. EPI01 has more than 25 years of research experience in injury, occupational and chronic disease epidemiology. As an occupational epidemiologist and public health educator, her major research focus has been on the surveillance of occupational illnesses, injuries, assessment of occupational exposures, and their relation to adverse health effects. She is also interested in vulnerable working populations, particularly migrant farm workers, children, and adolescent workers.

She has published in the areas of injuries in farm workers, substance use, occupational injuries, childhood cancer, pesticide safety training, ethical issues in working with vulnerable populations, and most recently chronic disease risk factors in Hispanic youth. In addition to her research, she currently directs an occupational epidemiology training grant, a component of the National Institute for Occupational Safety and Health. Dr. EPI01 is a joy to be around and is always motivated with the sense of social justice. This is truly a remarkable quality of Dr. EPI01.

Dr. EOHS03 Profile

Dr. EOHS03 is a 53 year old European American male, who works in the Division of Environmental and Occupational Health Sciences, at a school of public health, located in the southwest region of the United States. He is a Full Professor of Occupational Medicine and is a certified practicing physician. As a public health educator, he brings over 20 years of teaching experience, one of which has involved online teaching. In addition to his teaching experience, he served as the Director of the Division of Environmental and Occupational Health Sciences and as a faculty member at a university in a Spanish speaking province in Europe. Dr. EOHS03 has more than

twenty-five years of research experience in translational studies of environmental cardiovascular and respiratory disease, especially asthma. Additional areas of research interest include occupational and environmental respiratory diseases, occupational cancer screening programs, international aspects of occupational health, occupational and environmental health research in Latin America, occupational hazards in health care workers and molecular epidemiology and genetic susceptibility to occupational cancer. He obtained his medical degree from a university in Spain and did his residency training in internal medicine and pulmonary diseases at a college of medicine in the southwest region of the United States. He received his Doctor of Medicine degree from a medical school located in the southwest region of the United States, a Masters of Public Health degree from a school of public health in the southwest region of the United States, and a Ph.D. in Health and Life Sciences from a university in Spain. He is a board-certified physician in internal medicine, pulmonary diseases, and occupational medicine.

Dr. EOHS03 can be described as “young” and “hip” with a delightful personality and is full of energy. He is an innovator and an avid user of technology. He resides in the southwest region of the United States, teaches online, and currently has a public health collaborative with a university in Spain, where he provides consultation and policy administration for public health initiatives including occupational medicine and physician clinical training seminars.

Dr. EOHS04 Profile

Dr. EOHS04 is a 65 year-old European American male, who works in the Division of Environmental and Occupational Health Sciences, at a school of public

health, located in the southwest region of the United States. He earned his MS and PhD in Biology from a university in the southwest region of the United States. He is an Associate Professor of Environmental and Occupational Health Science. As a public health educator, he brings over thirty five years of teaching experience, four of which has involved online teaching. In addition to his teaching experience, he has served in several administrative capacities such as the Associate Dean of Outreach Programs, Assistant Dean of Academic Affairs, and Assistant Dean of Student Affairs. Dr. EOHS03 has more than twenty-five years of research experience in ecosystem structure and dynamics and environmental contaminating rodent ecology.

Dr. EOHS04 can be described as straight and to the point, often speaking his mind in full integrity. Moreover, Dr. EOHS04 is a person who enjoys technology and is comfortable learning new approaches to teaching with technology. He is an early adopter and one who is willing to launch out into the deep to try new teaching and learning innovations. He resides in the southwest region of the United States, teaches online, and enjoys hunting with a bow and arrow.

Dr. HPBS05 Profile

Dr. HPBS05 is a 60 year-old European American female, who teaches in the Division of Health Promotion and Behavioral Sciences, at a school of public health, located in the southwest region of the United States. She is a Full Professor of Health Promotion and Regional Dean located at a branch campus of a school of public health in the southwest region of the United States. As a public health educator, she brings over thirty five years of teaching experience, one of which has involved online teaching. In

addition to her teaching experience, Dr. EOHS03 has more than thirty years of research experience in the design, development, implementation and evaluation of school and community programs for youth, especially in the areas of tobacco and alcohol use, eating and physical activity. She is the senior scientific editor for the 2010 and 2012 Surgeon General's Report on youth and tobacco use and has published over 300 scientific papers in the professional literature. Included in this repertoire of publications are some of the most prestigious journals, not only in health education and health behavior, but in psychology, medicine, public health, and other fields of endeavor. She earned her Bachelor's degree in mathematics; her Master's in education and her PhD in education from a university in the west region of the United States. Among Dr. HPBS05 formal accolades, she is the recipient of many prestigious award recognizing distinguished researchers who have made outstanding contributions to the development, implementation, and evaluation of health promotion programs. Dr. HPBS05 is described as a person with an amiable personality. She has a quiet demeanor, yet has the ability to command an audience. However, when it comes to technology, she is an early majority. She resides in the southwest region of the United States, teaches online, and enjoys shopping at the farmers market.

Summary

The phenomenological research design was the most appropriate approach to address the problem identified and answer the research questions posed for this study. The study's problem dealt with issues regarding the experience of public health faculty who develop and teach online courses. To address this problem, further knowledge

about the participants' experience regarding the phenomenon was necessary. The phenomenological method allowed the researcher to gain data that described the participants' experience and allowed the researcher to develop themes from which an extraction of the essence of faculty involvement in online teaching at one school of public health was discovered.

This method was also appropriate because of the researcher's own experience with online learning. Though other research design methods expect the researcher to be detached from the experience of the phenomenon, phenomenology requires that the researcher experience the phenomenon and, ideally, be passionate about it. This aligned with the present study because the researcher has been involved with online teaching and learning for five years—arousing the researcher's interest in the topic. Therefore, these research methods were the most appropriate to address the identified problem and questions related to the experience of public health faculty who develop and teach online courses. Lastly, this chapter presented a profile of the participants, who were involved in this study. The next chapter highlights the participants' textural-structural description of public health faculty developing and teaching online courses.

CHAPTER IV

PHENOMENOLOGICAL ANALYSIS: EXPERIENCES

This qualitative study used a phenomenological research design, describing the experience of public health faculty who develop and teach online courses at one school of public health in the southwestern part of the United States. The goal was not to test any specific hypothesis relating to online learning, but to provide insight into the experiences of faculty involved in online teaching at one school of public health; specifically faculty who develop and teach online courses in a school of public health setting. Therefore, as faculty in schools of public health continue to embrace online teaching, to meet workforce demands and educational enhancements, research is needed to study the successes and failures of online learning in public health (Billot, 2007; Dodd, Laraia, & Carbone, 2003; Edouard et al., 2009; Escoffery, et al., 2005; Laria, et al., 2008; MacDonald, Alexander, Ward, & Davis, 2008; Mokwena, Mokgatle-Nthabu, Madiba, Lewisa, & Ntuli-Ngcoboa, 2007; Umble, Shay, & Sollecito, 2003; WHO, 2006).

Face-to-face, semi-structured, audio-taped individual interviews, written narratives, and artifact reviews were used to attain data. The data were analyzed for significant statements, invariant horizons, and recurring themes. Final steps in the analysis involved constructing a textural description that depicted what the faculty's experience of developing and teaching online courses were, and then constructing a structural experience that depicted how they explained their experiences. This chapter

presents the findings from the data collection process and the textural and structural descriptions.

Participants' Textural-Structural Description: Experiences

Studying each participant's invariant horizons, themes, textural description, and structural descriptions, a narrative was created to demonstrate the lived experience of faculty at a particular school of public health, located in the Southwest region of the United States, developing and teaching online courses. This is the textural-structural experience or a description of what was experienced and how.

Dr. EPI01 Experience

Dr. EPI01's lack of technology skills, fear, and uncertainty permeated through the underlying structures of her experience with developing and teaching online courses at this particular school of public health, located in the Southwest region of the United States. Dr. EPI01 serves as a regional dean at one of the campuses. Although she was new to a regional campus, she had directed a training program in occupational epidemiology in another city. Seeing that there was a lack of non-core courses offered for epidemiology students, she was prompted to reach out to all of the campuses by teaching an online course during the summer of 2007. This would provide a flexible time for both her and her students. Further, she saw developing and teaching online courses as an opportunity to convert a course she had taught for many years, refresh and update it, take advantage of the case-based nature of the course, and finally launch into the age of technology, by offering an online course. However, at times this fresh enthusiasm quickly turned into the contrary. One experience can be gleaned as the

course was being developed, while another experience emerged as the course was being taught. This provided an opportunity to see both sides of the online course development experience as experienced by Dr. EPI01.

While in the process and activities of developing an online course, the instructors' perceptions of support, time, resources and training were perceived as critical in determining the experience. However, such experience would change after the online course was developed and implemented. We begin with the experience of developing online courses. Dr. EPI01's experience of developing an online course at this particular school of public health can be described as being "a painful, time-consuming process" that made the process and activity of developing and teaching online "daunting." She stated:

I knew it was going to be an enormous amount of work; I felt inadequately prepared. I had never even used Blackboard, so my expectations were a combination of excitement, dread, and fear. I thought to myself how am I going to get this done. I also knew the only way to accomplish this was to jump in and make the commitment to teach, so that I could not postpone it.

This example, coupled with the lack of training opportunities and support offered by the school, made Dr. EPI01 spend much of her time learning technology tools and online development techniques on her own, without any guidance or support. This made her feel like she was not "developing" the online course correctly and that she was alone. Dr. EPI01 stated:

My main concerns when developing and teaching online were the time investments, my lack of experience with technology mainly Blackboard and Camtasia, and finding time to attend training. Technology just isn't my forte. It can be a bit scary, learning a number of new things. Being regional deans doesn't make it easier either, it in fact makes it hard to find time to adequately plan for and design an online course." She describes such an experience as "painful and stressful.

According to Dr. EPI01, she believed it was possible to develop and teach an online course, but she was unsure how it would turn out or if the quality of the course content would diminish. Such concerns plagued her experience. She stated "I often times find myself second guessing if I am doing something right or wrong." For Dr. EPI01, being prepared to develop and teach online was essential and therefore feels that faculty must be adequately prepared before starting the process and activities of developing and teaching online courses. Describing her preparation to develop and teach online, she shared the following:

I was not very prepared. I read some materials, conferred with an instructional designer several times from the main campus, which was in another city. I reviewed some existing online classes and didn't really know what to look for, and conferred with some faculty who had experience with online teaching. I had to have a crash course in learning new technology—Blackboard, Camtasia, and online teaching and learning issues within a short window of time. I think a month. Although we have a number of faculty teaching online from regional

campuses, my own experience was that it was more difficult not being able to confer in person at the main headquarters campus.

Such an experience made it difficult for Dr. EPI01 to develop her online course. She stated that the only help she received was in the form of informal sessions “on the fly”, from an instructional design support person at the main headquarters campus. This person came to her campus and gave her course design support and training. She described the training experience as the following:

I would say that my training opportunities were more informal consultations with an instructional designer and other faculty. The only formal training was a Blackboard session held by an instructional designer, which was very helpful. I was able to get some help notes and reassurance that I was on the right track and when I was off, I got some recommendations that would put me on the right track. I had to rely on my experience in teaching students for many years, which mainly led me in the right directions, even with minimal training.

As described by Dr. EPI01, preparation in the form of training, having access to support staff, and reassurance were very essential in preparing faculty to teach online. These components would help shape her experience developing online courses. However, even after obtaining the support of the instructional designer and an instructional technologist, after reading articles on online learning, and after conferring with other faculty who taught online at this particular school of public health, Dr. EPI01 still felt “ill prepared.”

Additionally, Dr. EP01’s perception of resources including tools, people, reading materials, and websites were pivotal in determining whether or not her experience

developing online courses would be useful or positive. For example, she thought it important to read printed and online materials before and while developing the course. With these resources available to serve as a guide, Dr. EP01 felt that she was on the right track. Although she did not have a person to always confer with, she could always return to literature to help point her into a direction. She describes the literature as a “safety net.” Additionally, Dr. EPI01 felt that the resources she used were useful and helpful. She describes her use of the materials as the following: “The web resources, the staff personnel, other faculty and students, and some of the background articles are helpful if not crucial to this process.”

Further, the process and activities of developing the online courses added to the experience of Dr. EPI01. She referred to developing online courses as course content conversation and repackaging. She described this phase as time consuming, exhausting, and difficult if one does not have good technology skills. Converting course content and materials was one of the most significant activities faculty would undertake while developing their online course, described Dr. EPI01. This phase had a profound influence on whether her experience developing the online course would become positive or negative. She pointed out that this phase of the developing online courses required good technology skills, which was contingent upon being prepared and having training and support. Dr. EPI01’s experience converting course materials became a daunting and overwhelming task. For example, she had to write scripts for the Camtasia lectures, to keep them focused and smooth for recording. She also had to compensate for a special needs student that was profoundly deaf, who could not use the video or

audio lecturers in her course. This meant that extra development time had to be used in order to devise transcripts of all the video and audio lecturers. She states that “I had to plan everything much more in advance, incorporated only one guest lecturer (as opposed to many), and had to think through in greater detail the materials and scope of the entire course.” In addition, to the technological course conversation component, the second phase dealt with learning objectives for each module. Therefore, Dr. EPI01 had to think through the purpose and desired learning objectives for each module and made sure that they related to the video and or audio lecturers. She revealed that this was a time consuming process, due to her lack of technology skills and experience, which left her feeling exhausted.

Additionally, coming to grips with the reality of online learning was more demanding than the traditional face-to-face teaching environment added to the complexity of the negative experience Dr. EPI01 initially experienced developing the course. This initial experience related to her assumptive thinking of what online teaching and learning entailed. For Dr. EPI01, her experience was mixed. Being that she was a faculty member and a regional dean, time was not on her side. She felt one could post things online and that would constitute developing and teaching an online course. She said “I was soon mistaken.” She concluded that developing and teaching online courses “is an unmet demand for more time” and that greater support for faculty is warranted, including having a TA that knows the course material and has taken the course before. This was helpful in the logistics, answering process questions from students, and when appropriate, helping with objective grading, when and where

answers are provided. This experience forced Dr. EPI01 to challenge her assumptions about online teaching in regards to time, efforts, and the thinking required, not only for development, but also with her role in the course as an online teacher. She said teaching online requires a large commitment of time (but the flexibility is worth it), and the burden would be light if and when you have assistance and support. According to Dr. EPI01, starting earlier, prioritizing other deadlines, and devoting concentrated time and effort to developing online courses, one would discover that developing and teaching online courses was a work in progress, and that you as a faculty will be working on modifying/improving/updating materials each year. You are never finished. However, your experience will become much more positive once you make the proper preparation and set aside ample amounts of time to work both ends of the spectrum – developing the online course and then the subsequent teaching of the online course.”

A final aspect of Dr. EPI01’s experience of developing and teaching online related to her assumptions about online. Although she had never taught online, she assumed it would be a great experience. She noted over three times in her interview about her excitement to teach online. However, this excitement soon turned into fear and frustration when she would learn the reality that she would have to first develop the course, launch it, and then teach it. Although she experienced a rough time being prepared, trained, and supported to develop the course, including converting course materials into digital formats, she would soon find joy once she started teaching the course. She stated:

Developing the online course was actually a painful, time-consuming process”, but the course was also gratifying, creative, and rewarding after the initial work was done. And my greatest benefit is about to come, as I am about to teach it for the second time this summer. It will be so much easier to work on.

The idea of satisfaction and having a sense of accomplishment allowed her to experience a positive, yet rewarding feeling while in the process of developing and teaching her online course. Dr. EPI01 felt that it was necessary for faculty to put in the hard “grueling” work in order to, as she explained “yield the fruit of the rewards when you start to teach what you have developed.” Her experience began to shift once the course development was initially over and the course was launched. However, other challenges presented itself when teaching online, which added some discomfort to the experience. The first dealt with the transformative role of the faculty and how Dr. EPI01 said she could not come in to teach once a week, but had to be on several times a week hours at a time to check postings, grade papers, grade projects, and moderate discussions, if something got out of hand. She said “you never have enough time for an online class.” Therefore, the daunting task of being online became a negative experience at first; however, Dr. EPI01 was able to adjust to this new role of course facilitator. In addition to becoming a course facilitator, she also took on the role as course developer and course manager. Not only was she responsible for teaching, she was now responsible for the life and engagement of the course. This added additional stresses to Dr. EPI01 experience developing and teaching online courses.

As one can attest, her course development experience began negatively, however when the teaching component began, the experience shifted from negative to positive.

This can be gleaned from the following statement:

In retrospect, I did enjoy the course, and believe that this course was actually improved by developing it into an online course. The format allows one to reach out to more students. You get an unexpected feeling of rapport, respect, and active participation among the students, and by the nature of the format, a greater range of topics. I actually enjoyed the experience much more than I originally thought, and thought it was better than teaching it by ITV.

Dr. EPI01 said “The hard part is over, now the fun part begins.” Dr. EPI01 felt that in order for faculty to have a successful experience at developing an online course and then having a subsequent positive teaching experience online, faculty must invest in the time to be prepared, to be trained and to develop and convert their course materials.

Overall, as many online instructors learn, the amount of time spent online responding to students, grading, and developing materials is greater with online than it is with in-class face-to-face teaching. When reflecting on her experience of developing and teaching online, Dr. EPI01 said

Based on only teaching online one time, I really like this form of teaching, much more than I anticipated. I am much more confident now in the tools, the process, and the opportunities online courses present having gone through the process.

Dr. BIO01 Experience

Important to Dr. BIO01's experience of developing and teaching online courses was his perception of innovation, support, time for course design, and development, as well as, resources. Dr. BIO01 felt that in order to move this particular school of public health forward and become competitive with other schools of public health in the United States, the school's leadership needed to recognize the opportunities that exist within educational markets and expand its access to a global market place and economy. He stated that "the best way to move the school of public health forward is to implement online learning." Much to his amazement, the bright outlook that once shined bright for online learning, quickly became dim when reality sat in. However, he did not allow barriers to negate his experience of developing and teaching online courses. He stated that "Early on, there was a "disconnect" from the promise, rewards, to the actuality. This is normal for systems, I guess."

Dr. BIO01's experience of developing and teaching online courses can be best summed up as a "challenge." He often referred to developing and teaching online courses as a "challenge", as if developing and teaching online courses was a "competition" or "game." He said "I enjoyed the challenge." Consequently, that challenge led him to be part of the first group of volunteers to develop and teach online courses at this particular school of public health. Due to his competitive nature and being in accord with the schools program for outreach education, he felt the reason outreach programs existed was to search out new opportunities to expand educational access of public health education to meet current competition trends in the education

market. Dr. BOI01 felt that while public health was a “relatively new, but a rapidly maturing field of study”, the complexities of the cyber world added to the challenge of promoting public health knowledge to local and global audiences. Dr. BIO01 felt that the school should take more of a stance to engage in innovative teaching methods to meet a large, yet diverse audience. In response to this, Dr. BIO01 said:

I for one am glad to have the opportunity to contribute to these goals, to help make them actualities, however recognizing as well that there are barriers too presented to the School as well as the opportunity and mandate to do so.

According to Dr. BIO01 this particular school of public health could learn and benefit from the ever increasing technology to enhance the educational experience for students and effective teaching, which would as he described allowed students to apply learning by concepts and objectives. From this illustration, we see the innovative thinking of Dr. BIO01.

Ultimately, Dr. BIO01 felt that the process and activities of developing and teaching online courses led him to a positive experience with online learning. It is safe to say that this level of innovation and challenge helped shape DrBIO01’s experience of developing and teaching online courses. He said “the process and activities of developing and teaching online, presented an opportunity to have a new and refreshing challenge to keep me thinking and keep the enjoyment of teaching fresh, and that hopefully would also benefit the students learning.” He viewed developing online courses as a challenge that could become enjoyable or dreaded; enjoyable in the sense that the activities and the process of developing and teaching online courses are to be

welcomed and not feared or resisted; in the sense that online learning was a great deal of work. He points out that this is the rationale for why a negative experience develops. According to Dr. BIO01, faculty should welcome challenges and find personal opportunities for professional and growth. When successful at developing and teaching online courses, one must continuously improve his or herself, as well as, their teaching craft. Dr. BIO01 said “I am aware that CQI, continuous quality improvement is both needed and desirable.”

Additionally, perceptions of the role of the student, as consumers affected his experience of developing and teaching online. As an instructor, his experience of developing and teaching online courses would be affected by his world view of the role an instructor should have and who the instructor works for. Dr. BIO01 said that the “students were the ultimate audience for the course. One must keep this in mind when designing their courses.” According to Dr. BIO01, he gradually moved in the direction of web based instruction by using these techniques in his face-to-face courses. He was able to practice employing basic online learning skills before launching into a fully online course. This made the transition and challenge easier to deal with and less stressful and daunting. This can be gleaned from the following that illustrates his innovation:

In the past I had developed learning by objectives and distance education packages many years earlier, in the improvement of vital statistics systems in addition to program evaluation, for two examples. Thus I felt... well I knew what I was getting into in both the positive aspects and also within the context of

challenges. Finally I was told to teach biostatistics on online as a fully online distance course.

Dr. BIO01 reveals that developing and teaching online courses was generally what he expected. In an interview he revealed:

It pretty much went the way I expected. Especially considering that there is such a mix of student types, learning readiness, style of learning, prior orientation or skills that went into the building blocks of this course and that they were all over the place. Again this was to be expected.

He said his experience of developing and teaching online taught him to expect that students would come from a diverse background, not only in intellectual capacity, but also in the social, cultural, and technological aspect as well. These diverse traits had to be taken into consideration, while developing online courses. This further added an additional complexity to developing and teaching online courses. Moreover, these traits had to be taken into further consideration as the course was being taught online and as students began to interact with each other and the professor, who was teaching the course.

Further adding complexity to his experience of developing and teaching online courses, were issues of time to design and develop the online courses, the role of technology, and support. First and foremost Dr. BIO01 had to devise a course design matrix. This took a great deal of time for him. He referred to developing online courses as the “devourer of time.” He had to take considerable time to design the course including orienting and developing a “story board” or design map for the course,

identifying and classifying what was available online to use, in addition to designing the learning that was to take place by using concept based instructional activities and defining, and in some cases, redefining objectives. In addition, Dr. BIO01 revealed that he had to fundamental reconstruct the course syllabus based on the new design map and storyboard for the course. This reconstruction forced him to abandon his old way of thinking of teaching, while embracing what the online environment had to offer. This left him with a great deal of work, which in turn led him to feel exhausted, yet enthused. Dr. BIO01 said:

Although the developing of an online course is tough, rather I should say the design component is tough, I enjoyed the process because I learned more about how to teach biostatistics better and the various methods I could use. This wouldn't have happened had I not made an online course.

Finally Dr. BIO01 wanted to design a course in such a way that the course "Assured him that it met the full needs of the syllabus and was indeed a credible graduate course as mandated in the catalogue."

Moreover, as Dr. BIO01 transitioned from the course design phase to the course development phase, he was often frustrated with his interactions with technology. Dr. BIO01 held that technology was a necessary evil that faculty must learn in order to develop and teach online courses. He revealed that one must package the course with coherence and in accordance with the design map of the course. This was difficult for him to extend, because he would have to spend more time planning and tweaking his design ideas, as he developed and packed his course materials. He said "first they

[faculty] must learn the course management system and other technology tools such as website software, video software, and media software.” He was not too excited to talk about the course management system. After further probing why, he revealed that the course management system was not user friendly, that it was dull, clunky, and had no “pizzazz.” He stated that “Blackboard is clunky, look at the spell checker for example; it’s from the year one, not friendly at all.” He further explained that the course management system sometimes made it difficult to develop the course due to limitations and constraints of the system. He said “You can only add certain files with a certain file limits of a certain size.” This often led to Dr. BIO01 becoming frustrated and annoyed, because in order to teach biostatistics well online, Dr. BIO01 indicated that one had to show a number of videos on solving equations or how to solve equations, as well as the application of statistical models in two or three dimensional visual displays. The course management systems would not allow Dr. BIO01 to upload large media files and thus he became annoyed and had to find alternatives. In finding these alternatives, he had to learn how to edit video files and export them into additional file formations to reduce the file size. Although, the course management system was one piece of technology he had to learn, he had to learn other tools including video capture, video editing, presentation software, and web and multimedia software. Learning the software was challenging for Dr. BIO01, however just as he does with other challenges, he welcomed the opportunity to learn.

Finally, when the course was fully developed, there was an experience of release and reward. However that feeling of euphoria quickly changed when he wanted to pilot

test the course for “bugs” and asked the assistance of the Outreach Program Developer, the person in charge of working with faculty to design and teach online at that time. It was clear Dr. BIO01 was not happy or pleased with this phase of the experience.

According to Dr. BIO01, the Outreach Program Developer was not helpful or supportive. The person in this role gave little attention to testing, or real or online course design. This left Dr. BIO01 upset and angry. He said:

The hurry mode of the Outreach Program Developer was unprofessional and non support. There was no time allowed to pilot test the materials. When I asked for one semester first to do this develop-pilot test revise- then implement- it was rejected out of hand. When I pointed out this was not consistent with either good curriculum development or even good methodology, this was met by an expletive, and told “to move on with it. I was furious.

However, there was nothing I could do. Dr. BIO01 found ways around it, however this part of the experience is still buried in his mind, etched in his memory.

In addition, little support, in terms of quality professional advice and services, the uneven access to help and personnel changes in the area, left lapses in the department and at times there was no support person to help. This also made Dr. BIO01 feel frustrated. When this component was probed for a deeper meaning he simply said, “Let’s move on.” Then I knew this was a sore issue that caused frustration, pain, and discomfort.

Dr. BIO01 revealed that the technology affected the students' readiness or familiarity with online learning and his ability as a faculty to engage in online learning.

He said:

As with any technology this also affected the students' readiness or familiarity with online teaching. Some look forward to it, others were totally unfamiliar with it, some "had no choice", and others saw it [online courses] as solving a big problem for them that is logistically able to fit the online course into their otherwise busy life.

He revealed through the interview that this presented other challenges to developing and teaching online courses. Issues with technology, not only learning tools to develop the online courses, but to teach the online course was perceived as a problem that affected Dr. BIO01's experience of developing and teaching online courses, but also affected the students. According to Dr. BIO01:

You have to know technology in order to teach online. If students come to you with a technical issue affecting them and their ability to complete the assignments online and you don't know what to do, you are in a pickle.

Moreover, Dr. BIO01 said:

Again maybe not unexpectedly, many students, just "show up" including asking where is Blackboard? How do I get on to it? These should not be the questions that the instructor has to deal with when in fact, the students have challenges to get into the material of the course. Some students lack basic skills like understanding what a file extension is and what is its function. For example,

trying to open a .ppt presentation with Word and wondering and frustrated that they can't view the presentation.

According to Dr. BIO01, this can become frustrating, having to serve as a technical support person to the student when they should have already been prepared with such knowledge.

Like most innovative faculty, Dr. BIO01 didn't allow roadblocks to get in his way. He in fact worked to find ways around the system to get what he needed to be successful in developing and teaching online courses. As the development and testing of his course came to an end and the start of online teaching began, much of his frustration of the past left "like a petal floating in the wind."

Looking back on his experience, he reminded me that he was and still is a supporter of online learning and that he was happy to share the Schools goals and the opportunity to play a role in developing and teaching online courses. However, he was quick to identify the lack of rewards for teaching online courses. Developing and teaching online courses didn't count toward tenure, although he was already a full professor at the time he started developing and teaching online courses, nor did he get any monetary remuneration. He stated the following:

There are few rewards for teaching online, for example, asking to go above caps because of demand, and volunteering to do so, and then seeing that the course exceeds the class enrollment to get any credit on your performance evaluations.

He reiterated that the rewards for developing and teaching online courses were personal and intrinsic. In his opinion, there were significant enduring rewards for online learning

including, the excitement of meeting new challenges, while getting even better technology, supporting students learning, supporting the Schools outreach efforts, and becoming better teachers. He also recognized that there are constraints placed upon the School, either in terms of mandates, as well as resources. Therefore, one needs to approach developing and teaching online courses at this particular school of public health constructively. He said in closing “I, for one, am glad to have a role that made some contributions to the success of the students and this school of public health.

Dr. EOHS03 Experience

Dr. EOHS03 has a unique experience, only indicative to him. His colleagues call him a maverick, others a hard worker, however of fundamental importance to Dr. EOHS03’s experience of developing and teaching online courses, were his perception and attitudes towards growth and development in relation to support, time, as well as, training, and resources. These points played a critical role in how Dr. EOHS03 experienced developing and teaching online courses at this school of public health.

Dr. EOHS03’s experience can be described as very positive in that he was very fortunate with relation to time, preparation, support, and resources. He described being fortunate in two ways. First, he was able to design and develop his online course one full year before it was implemented. This allowed him time to become grounded in online instruction design theory and methods of teaching online. Secondly, he was provided with one-on-one instructional coaching and mentorship by what he referred to as “by two ably persons” at the School of Public Health, through regular meetings and assignments, which allowed him to develop his course based on a fairly solid theoretical

foundation. Dr. EOHS03 says “Personally, I had a blast developing the course – more fun than I have had in many years!”

However, reflecting on the interview, it was understood that Dr. EOHS03 volunteered for the online course challenge. According to Dr. EOHS03, volunteering to develop and teach online courses at this school of public health was a combination of several factors. At the time the course came about, he explained, it was being taught in a traditional face-to-face format. Additionally, he also served as the director of the Division of Environmental and Occupational Health Sciences, a position he no longer occupies. He explained that the division was in the process of undergoing an exhaustive review of their academic curriculum, and that the faculty in the division proposed the idea that a core course be developed for all incoming students coming into the division called foundation of occupational health science. The reason for this, he explained, was because of the bulk of students coming into the program seemed to be heterogeneous. This course would provide an opportunity to level everyone at the same knowledge based. Dr. EOHS03 stated:

This was a good idea and then when we entertained names of volunteers to teach the course no one took a step forward and so I did and back then that is when I believe in that the whole concept of modeling the behavior so that others would follow and sometimes learn. I guess I was a bit naïve. Anyways I got stuck with the course. That is another way of saying it.

According to Dr. EOHS03, the course was to be initially developed into a two part semester face-to-face course. Then, later the course was whittled down to a one

semester course. However, from the very beginning of the discussion to design a new course for incoming environment and occupational health graduate student, he would eventually propose moving the course to an online course format. The idea would make developing and teaching the courses much easier, manageable, and engaging. For Dr. EOHS03, at about the time he was delivering the course for the second time face-to-face, an opportunity to spend significant time in Barcelona, Spain came up. Therefore, the appeal of turning the traditional face-to-face course into an online course increased and that he had an entire year to plan, learn, and develop the online course. Illustrating this point, Dr. EOHS03 revealed:

I knew I was going to be doing this from Barcelona. I knew it well in advance, about a year or so and so that gave me an opportunity to plan it over a long period of time which I said in my narrative was a huge advantage.

This made Dr. EOHS03 very satisfied and pleased with the challenge that was presented to him.

True to Dr. EOHS03's experience of developing and teaching online courses was transformative innovation. When he took the challenge, a combination of factors lead him to create the course. From talking to faculty and students, he began to understand that developing and teaching online courses would be more than just a matter of posting PowerPoint on blackboard and hoping for the best. However his "gut feeling" revealed that developing and teaching online courses would involve some fundamental changes in approaches to teaching and learning. This made him interested in the challenge.

Illustrating this experience, Dr. EOHS03 described how he had been "bored" with face-

to-face teaching and suggested that such boredom lead to developing and teaching online courses at this particular school of public health. He said, “Frankly, for a number of years, I have to admit that I wasn’t stimulated in terms of new course development using traditional formats and this presents an opportunity to do that and so I took it.” This made Dr. EOHS03 feel new and energized.

Another illustration of this experience developing and teaching online courses at this particular school of public of health dealt with his expectations for developing and teaching online courses. Dr. EOHS03 became excited about the expectations. In the interview, the word excited was heard over ten times. After he had read articles on online teaching and learning and consulted with an instructional design and the instructional technology on staff, he began to be excited about using novel approaches to teaching. The expectation was that he would be able to develop a course that would be exciting for him as the instructor, as well as to the student, due to the fact that the course would involve a number of new formats for learning and new activities. The second component to his expectation that allowed him to form a positive and exciting experience of developing and teaching online courses was the convenience and anticipation of completing this project from Spain to Houston, without missing a beat.

Additionally, Dr. EOHS03 revealed that there were a couple of reasons for developing and teaching online courses. One was to see if he could make it compatible with being able to be in Barcelona, Spain for 6 months. Secondly, since he was the division director at the time, he thought that if he could show the other faculty in his division that one could develop a solid online course for a large four credit hour course

from a distance, it would be feasible to accomplish and replicate. He revealed that this would in turn encourage other faculty to get into more online teaching themselves. Underlying this belief was the idea of learning, growth, and personal development. He wanted to see other faculty in his department grow as faculty and engage in new innovative teaching practices. This idea made him happy. He said, “So I wanted to develop a course that they could look at and see that it worked. I don’t know if that happened, however, nonetheless, I was still excited about the possibly.”

Also of note to Dr. EOHS03’s description of developing and teaching online courses, were his concerns about developing and teaching online courses. These included his perception of time, timelines and technology. Time was certainly a major factor that helped influence his experience of developing and teaching online courses into a favorable one. He had a hard deadline date where everything had to be implemented by the fall of 2008. However, as Dr. EOHS03 explained, as he became more involved in the course, he realized that developing the online course involved not only establishing a framework for learning, but also performance objectives, logically sequencing the objectives, and designing learning activities so that everything fit together. According to Dr. EOHS03, developing the online course would also involve time for testing, revision, and more testing, to see if everything worked according to the course design specifications. Dr. EOHS03 stated that his concern was that he would launch the course on the first day and all the glitches would start. Students would start falling behind and he, as a faculty would fall behind, due to trying to troubleshoot the problem. He felt this would cause students to start complaining. He said:

You have to remember our graduate students tend to be older than the typical undergraduate college student. Some of them are quite a bit older and so technology creates a fear in them and all they need is an excuse to say – this doesn't work – and if a glitch happened fortunately there were very few glitches but because I think there was enough of time testing before hand to make sure it worked day one.

However, lurking in the back of his mind was the fear he would fall behind and that he would not be able to catch up or get himself back on schedule.

Another important factor that influenced Dr. EOHS03 to experience a favorable and exciting experience of developing and teaching online courses was the method and means of how he was prepared to develop and teach online. This factor of being prepared with theory, technology, and methods were crucial elements in the development of his positive experience associated with online learning. According to Dr. EOHS03, once he understood that developing and teaching online courses would take a great deal of pragmatic shifts in his role as a teacher and in the students as learners, he finally was able to develop his course. This made him very happy and energized to continue the online development process. He realized that developing and teaching online courses were a great deal of work. The one thing that helped the most, according to his interview, was working with an instructional designer and an instructional technology on fixed schedules. These support personnel would give him assignments and materials. The first of these assignments started with Dr. EOHS03 systematically mapping out the course, defining the course in terms of instructional

theory and objectives, and then designing a possible module sequence and course calendar. Dr. EOSH03 said “this was actually very very helpful because it allowed me to be grounded in the theory and in teaching in general.” Further, he revealed that this made him feel satisfied that he was now learning to teach and how to design learning activities. He felt pleased. The recommendations by the instructional support team allowed him to follow a step-by-step plan, where he would meet with the team, present his homework, and receive another assignment for the next phase. Dr. EOHS03 said “Eventually it didn’t take many of those for me to start diving and start to develop content, module, templates, markups, etc.” The meetings between him and instructional support became less frequent and the need for homework became less and less. He would still meet; however, the meeting was to bring what he had worked on. Additionally, the meetings became supplemented with the instructional technologist, who introduced Dr. EOHS03 to the main software that would be used to develop the online course. Dr. EOHS03 revealed that it took time to experiment with and try out Camtasia, Captivates and Flash. Finally, he noted that it took him a while to figure out which of the four software packages would meet his needs. In the end, he settled on Camtasia and Flash Form.

One of the main structures that lead Dr. EOHS03 into experiencing a positive experience, while developing and teaching online was the fact that he did not encounter any barriers that would negatively affect his ability to develop and teach online courses. As a self directed faculty, he had a great deal of freedom to design the course how he wanted. Moreover, the students who took the first offering of this course were very

good at giving prompt feedback when things weren't working correctly; therefore, he had previously committed to being available 24-7 to them, so that glitches could be rapidly corrected. Although this turned out to be a huge time investment for Dr. EOHS03, he said "it was well worth it."

One issue that could have turned into a barrier when the course was offered came in the form of a technical glitch with the course management system. When he offered his first exam using Blackboard, students began having issues. There were no problems setting up the exam, entering the questions or pre-testing it, he described in the interview. The problem came when he decided to experiment and try and use a software package called SecureExam, a new license/program that the School had recently purchased, however the software had not been tested by any of the faculty. According to Dr. EOHS03, SecureExam was supposed to give password-only access to the exam, and prevent students from accessing other Internet sites such as Google during the exam period. It backfired, despite following the preparatory instructions – students would follow them and were blocked from accessing the exam. In the end, working together with the Blackboard person at the School, they were able to deactivate it, and things went fine from there on. Interesting to note, Dr. EOHS03 says that this entire notion of SecureExam generated some philosophical discussions about just how far faculty in a graduate school should go to institute controls during a timed online exam, above and beyond simply relying on the honor code. Nevertheless, the subsequent exams were in a take home format and no problems were encountered when he used that format. The only barrier Dr. EOHS03 said existed was mainly learning the technology. He thought

that the learning activities were easy to develop because they were fun. He was “really shooting from the hip” and designing the online course in a way that would be fun and by extension to the student. Describing this portion of the experience, he said:

It was really fun. It was really a fun activity, one I looked forward to. There came a point where doing all my other work became an interference because what I want to do was develop a course, because I was having fun doing. I don't think my patience appreciate it.

He identified his attitude and beliefs about online learning as a main structure in shaping his positive experience with the online course development process. Dr. EOHS03 felt that it was important not to make or have any preconceived notions or assumptions about online learning. He knew this would taint his ability to be objective and work hard, while exploring ways to have fun with the process. From Dr. EOHS03's perspective, remaining positive and free of assumptions will allow a faculty to enjoy developing and teaching online courses. He said:

Well the first time I read about online teaching I was interested. I wanted to see if online lived up to the promise. After I was done with developing my online course, I was convinced. I didn't go into this process with a negative attitude or assuming the worse. I had a very positive attitude after the experience. I came out with that attitude reinforced.

Notably, this attitude influenced his entire experience.

Reflecting on his positive, yet exciting experience of developing and teaching online courses, online courses served a purpose of (re)sparking his interest in teaching.

After teaching for over twenty years, Dr. EOHS03 revealed that he had become bored or complacent. He admonished that he had always been interested in teaching; however he had not been as excited about developing a new face-to-face course as he had been about developing and teaching online courses.

Dr. HPBS05 Experience

One of the main factors determining Dr. HPBS05's experience of developing and teaching online courses was her willingness to seek an online course foundation that was already established and engage with a faculty who was a seasoned online course development practitioner and a successful online instructor. Discussing this, she said:

The course was up by another professor who taught it for several years online.

She allowed me to shadow her online within her online course for a semester as a course instructor to lurk and see what it was like in the online environment in addition to how the discussions worked and how the course was set up.

The fact that Dr. HPBS05 was able to experience an online environment and experienced how an online course was set up, allowed her to form rather early, positive emotions concerning developing and teaching online courses. She said, "I was very fortunate not to have started from scratch." She further illustrates this positive experience by noting that she was blessed and that if she had to start from scratch, then developing and teaching online courses would have been a huge challenge. She said, "Starting with a model is so much better of an approach than starting from scratch."

Dr. HPBS05's experience developing and teaching online courses can be described as being an overwhelmingly positive experience. However, at first, she did

not feel or go into the process thinking it would be positive. In fact she had strong reservations against online learning. She often looked down at online learning as a form of instruction and thought this form of learning was much like the kind of course you would send away for and that students would read a great deal of materials and then take a test. She felt like online learning at this particular school of public health was going to be something similar. After probing this theme, it was revealed why she thought this way. Much of her thinking was shaped by her tenure at a large research intensive institution in the mid-west as a tenured research faculty member. At this large research intensive institution, the emphasis was on research and funding to support that research. She mentioned that faculty salaries had to be covered by research monies. Therefore, faculty at this large Midwestern research intensive institution were intensely engaged in research, more so than in teaching. However, Dr. HPBS05 was able to teach a course in program design and another course in adolescent health. Once, she was able to get into a groove of teaching and had a full load of research, the idea of online learning or even online courses were a mere “after thought.” She mentioned that she often heard faculty from that particular research intensive mid-western institution laugh at the idea of online learning and those who taught online courses at that campus were looked down upon. Hearing so much negativity about online learning, she assumed that was the reality of online learning. However, coming to a state in the Southwest region of the United States, she saw the complete opposite and had a shift in thinking about online courses, after shadowing another professor in her online course. She revealed that “I didn’t realize online courses would be multifaceted and interactive. I think that is kind of cool.”

In addition to her previous assumptions and experience with developing and teaching online courses, she revealed that her lack of experience with developing and teaching online courses had her at a deficit, which helped to form her low expectations.

“I thought the students would just read stuff, she said, “You know I had no idea, I just thought I knew that a faculty course went well so I thought I would give it a try.”

Looking back at the course that was given to her, she realized that the online course had high quality instructional materials and rigorous assignments. Dr. HPBS05 revealed that she did not realize that the discussions were such an important component to the learning experience in an online course and that she would do a great deal of teaching from the discussion boards. Although she had low expectations for online learning and developing and teaching online courses, she became pleasantly surprised as she experienced the process and activities of developing and teaching online courses and the new realities it presented.

While in the process and activities of developing and teaching online courses, Dr. HPBS05 said that her main concerns dealt with the interpersonal social connection that formed while teaching. She said, “I was so used to being in front of a class and connecting with students – you know and being able to be formal or get to know them.” Therefore, Dr. HPBS05 became afraid that she would not have that connection with students, but found through the discussion board, she did not have to see them in order to establish or sustain a connection with them. The discussion board provided that social connection. Additionally, she said that she would have to spend a great deal of time in

the discussion boards to build rapport and to make sure students were participating in the discussions. Describing this experience, she said:

I found out that I would spend a lot of time the first six weeks of the course and a lot of time in the discussion board and made sure I would respond to all of the posts people would put on and really spend time – I ended up spending 2 to 3 hours a day doing that so that I was instructing. I also felt that I could connect with the students.

The discussion board became an essential tool and platform for teaching, social interactions, instructional feedback, and correction. Dr. HPBS05 said that the discussions were essential and that it really takes the course to teaching instead of just a passive learning experience, where one could perform Google searches to find and get the same information. This critical factor of teaching and interacting via the discussion board added to the favorable experience of Dr. HPBS05 developing and teaching online courses.

The underlying structure of shadowing the online course helped Dr. HPBS05 experience and learn what a rigorous online course was like. She said, “Well, I think I was just lucky in taking a faculty course and seeing all the different things she did with that.” This helped spark interest in becoming innovative in the online course development process. According to Dr. HPBS05, after being exposed to another faculty’s online course, she started to think through ways she could add more video to disseminate course lectures and course content that related to various course topics. Further, she mentioned that there were a number of possibilities, as she worked through

the online course development process, as her time permitted. Since a faculty had given her a copy of her online course, according to Dr. HPBS05, her new responsibility in developing and teaching this online course was to tweak the course calendar, change the course schedule, update the readings, update the learning activities, change dates, add several videos to introduce herself, and deliver some of the content. She said, “This was a blessing.”

Much of this development took place during the winter break in December of 2007. It is important to state that due to her role as regional dean, time was not on her side; and while she liked the idea of being online and communicating online, her role as regional dean did not permit her to spend time on developing her online course.

Describing this experience, she said:

I like the idea of being online. I wanted to get to know what students were like across Texas. The course was set up by another professor. The other thing is that I liked being regional dean. I felt like having a class that had more flexibility was good because I could teach the online class all day long and in little bits so I could teach at night and at work – because here, if someone’s calls for a meeting, the dean or the Vice Chancellor for Health Initiatives or I have to be at the meeting that really needs to take priority and I need to be there. So I felt like this kind of fit my role as regional dean and then I taught it the first time and thought it was really fun. However, I had to create time late at night and on the weekends to work on the course. Nevertheless, this was a fun experience.

While time and her role as regional dean interfered with her online course development, she knew that over the holiday break she had to get ready for her class that was set to launch immediately in January. Therefore, according to Dr. HPBS05, she needed to go through each and every week and systematically organize the course content. In addition, during this phase, she realized that she needed an intensive workshop on the course management system Blackboard. Therefore, on her own, over the holiday break, she learned Blackboard with enough proficiency to navigate the system, post items, and change content. She mentioned that learning Blackboard was pretty easy and intuitive, saying “It was not a difficult program.” Therefore, according to Dr. HPBS05, the easy experience of learning blackboard and the fun time she had developing the class, not only influenced her experience of developing and teaching online courses, it also fueled her desire to start teaching the course. Therefore in January of 2008 she was ready to go full speed ahead with the course.

Another underlying structure that influenced Dr. HPBSO5’s experience with developing and teaching online courses was the idea of being prepared and trained. Being regional dean of a regional campus at this particular school of public health, she was pressed for time; therefore, working independently worked well with her schedule and personality. Besides an instructional design support person coming to her campus and delivering a workshop on blackboard, she prepared herself. The World Wide Web served as a vehicle to learn and explore online course development. In addition to using the World Wide Web as a resource, Dr. HPBS05, consulted with the faculty, who gave her an online course to shadow and borrow content from. She was able to obtain

answers and guidance from this faculty when she had any questions. Then Dr. HPBS05 resorted to dialoguing with students. She felt that students knew more about online learning than she did. Dr. HPBS05 said, “It was really good to talk to faculty and student cause you can get straight to the point and that you’re getting help while you need it. It was great.”

The reason why Dr. HPBS05 had such a positive and fun experience developing and teaching online courses was due to the fact that she had little development to engage in. The course was already setup. Topics were developed and readings were already identified. Therefore, this added together with the power points, plus the book was the foundation of the online course. What was found to be of great importance to developing and subsequently teaching the online course, was the construction of the course syllabus and building expectations, along with a detailed course calendar. Therefore, according to Dr. HPBS05, the syllabus became an important item, because the student needed to know what they are going to do every single week and what they were responsible for. This item was found to be really helpful in terms of conducting the class. Therefore, according to Dr. HPBS05, the course was structured so that within a week, one had to complete a certain number of tasks. Following this component, Dr. HPBS05 tried to pick discussion questions that went with the readings and were a bit provocative, so that everyone would not agree and would participate giving their stance on the issue. This presented opportunities for discussion and interaction with the course materials and with each other as peers. For example, Dr. HPBS05 said:

One question could be “What do you think about HPV testing for adolescent girls” and “how does that fit into a certain theory.” So you get people all over the place saying it’s not appropriate, it’s up to the parent, no it’s a public problem.

Dr. HPBS05 wanted the discussion questions to get students actively engaged and involved with public health current topics, in behavioral science current events, and not just the textbook. This level of developing and teaching online allowed Dr. HPBS05 to feel like she was teaching and that it was important for her as instructor to stay on board in the discussion board and be on top of what students were doing. This made her feel satisfied as an online instructor.

Another structure that influenced Dr. HPBS05’s positive experience developing and teaching online courses was the issue of support. Dr. HPBS05 had various avenues of support that aided her while she developed and taught her online course. Specifically, when she experienced technical difficulties with the course management system blackboard or if she didn’t know how certain functions within the course management system worked, she would rely on the technical experience of her TA. Further, relying on the advice of the faculty, who allowed her to shadow her course; she was able to make sure that she carved out enough time, roughly 2-3 hours a day to work within her course. Describing this experience, Dr. HPBS05 said, “You know this takes a lot of time, even if it was a half an hour here and there, but it’s worth it.” She made sure that by the end of the day, she had gone through all the discussion postings.

However one aspect of support that Dr. HPBS05 had a negative reaction to was the notion of the online users group. This online users group was started by an Associate Dean for Educational Programs back in 2008. This group was a group of faculty who taught online and met once a month. They were supposed to workshop and discuss their successes and failures, while sharing techniques on how to be successful online instructors. Dr. HPBS05 was adamant that this group did not serve the needs of the faculty, due to their lack of expertise in online learning, instructional design, educational technology strategies, and methods for teaching or developing online courses. She said that she would rather talk to somebody and then have someone provide her with support when she needed them to explain various software or course management systems functionalities. She said “that would be more interesting to me.” Illustrating the lack of substance and effectiveness of the online users group, Dr. HPBS05 said:

With this online users group you can get about 10 minutes worth of information, but it takes about an hour. So it’s not very efficient. It’s a lot of faculty talking – nothing very useful. It’s like a meeting, a waste of good time.

Reflecting back on her experience developing and teaching online courses at this particular school of public health, she maintained that her experience was fun, positive, and relatively easy.

Dr. EOHS04 Experience

Dr. EOHS04’s fascination with technology, his work ethic, attitude, and ultimately his views towards learning and growth contributed to and became major influential elements in his experience of developing and teaching online courses at this

particular school of public health. His experience of developing and teaching online courses can be described and summed up as a “very rewarding” experience. Describing this experience, he said:

Overall, the process of creating and teaching my first online course was a very rewarding experience. I enjoyed the new challenge of repackaging the content from an existent course for online delivery. I’m sure that my fascination with hardware and software technologies and the ability to work on this endeavor from home after normal office hours contributed to this experience.

A major structure underlying his experience of developing and teaching online dealt with his motivation for developing and teaching online courses. According to Dr. EOHS04, the full manifestation of his online course was an evolutionary process. He stated that his face-to-face course was moving in the direction to be hosted online for a number of years. He revealed that the course started off face-to-face. Then, when the school began teaching courses between campuses, his administrative role of being the Associate Dean of Outreach Programs, was to implement an interactive video teaching system to connect all of the regional campuses with the main campus. He said that the “ITV development was cheered at the school of public health.” Therefore, in his duties to reach more students, he began teaching a course via ITV as the technology was being developed, including hardware installation. In addition, as Dr. EOHS04 worked to implement an interactive instructional video teaching system, the executive school administration embarked on a discussion to offer a certificate in public health as a non-

degree program to broaden access to public health education and training. Again, Dr. EOHS04 was called to put this program together.

The principal goal of the public health certificate program was to reach out to as many public health professionals who wanted to be public health professionals around the state and by proxy to local, national, and global audiences. According to Dr. EOHS04, the certificate program was also designed for students who might want to pursue a Masters of Public Health or those who did not want to invest the time in a full degree program, but wanted to establish competencies in the core areas of the public health's certificate program. Therefore, in 2005 the school leadership set a goal to have online versions of each of the five core courses that made up the certificate program available online. According to Dr. EOHS04, in the spring of 2006 there were five online courses. These five certificate courses included environmental and occupational health sciences Dr. EOHS04's course, a course in epidemiology, a course in biostatistics, a course in behavioral sciences and finally a course in management was converted into an online form.

However, at a personal level, his motivation lay in the creation of the non-degree program for students. He said:

ITV is fine if our students can move on to one of the regional campuses and sit in a classroom. We wanted to reach students in remote areas around the US and around the world who might want to have access to his public health knowledge.

His motivation was one of providing the best possible course, to the largest population that was not time and place bound. Given the fact that his interest in teaching face-to-face was fading, Dr. EOHS04 needed a challenge to spark his interest in teaching again.

Another critical factor that influenced Dr. EOHS04's experience developing and teaching online courses was the transformation of thought, expectation, beliefs, and attitudes associated with the journey to convert course materials and place them online. According to Dr. EOHS04, this portion of the experience and phase can be described as a significant challenge due to the fact that course materials and assumptions, expectations, and thinking had to be transformed for online teaching and learning. Prior to the process and activities of developing and teaching online courses, Dr. EOHS04 was very skeptical as to whether an online course could provide a comparable experience to its face-to-face counterpart for students. He said:

Again my beliefs were not good. I was wrong, although my delivery of the course material has been changed greatly in the last five years, I still have fear that I will not be able to do a good job developing or teaching online.

His fear, in the beginning was motivated by a strong sense that one could not do a good job online. However, Dr. EOHS04 has proven this assumption to be false. According to Dr. EOHS04, the evidence of this shift was evident in the reviews and results he received from his student evaluations. His online course evaluations have always remained higher than his face-to-face averages over the last five year period. Dr. EOHS04 said:

The reviews I get from students talking about the online course made it a better course than the face-to-face course. I don't have anything except the surveys that I give them to determine that but I've been giving the basically the same survey every year.

As he journeyed further in the process and activities of developing and teaching online courses, he revealed:

I don't have any doubt that developing and teaching online courses would be successful. If you invest enough time and effort in teaching an activity you'll usually see some element of success. At first I wasn't so optimistic about putting a course together, but now, I'm very optimistic.

Even the expectations were influenced by his change in beliefs in how he saw online learning.

An additional underlying structure that influenced Dr. EOHS04's experience of developing and teaching online courses, was the process of how he developed and taught his online courses. Describing this element, the online development process was seen as "an evolutionary transformation." Most of the activities that were a part of his online course could be traced back to a hybrid course, where the content was stored on the World Wide Web via a server. Further, he would assess his course by reviewing readings and subject topics covering a sixteen week semester. Reviewing the readings allowed Dr. EOHS04 the opportunity to see if the readings were current and if there were newer papers that made the same point. He said, "You try to minimize redundancy in overlap and if it's not really critical to the student understanding of the topic."

Therefore, the activities of developing and teaching online courses, involved updating and refining the course design, objectives, and learning activities. But that was part of the process before the course became an online course.

The second step would involve how the course content would be delivered. Dr. EOHS04 revealed that the majority of the face-to-face or ITV activities and course content were stored on the World Wide Web and became part of the blackboard course management system. This integration of the Blackboard course management system provided an opportunity for students to move their term papers and class files to the course management system. Dr. EOHS04 said that “All of the content was either in the textbook or a blackboard page.” Therefore, Dr. EOHS04 described the transition from a face-to-face course as a shift from a paper exchange environment to an environment where you don’t see paperwork or the students anymore. This successful transition took place through the hybrid transition, where Dr. EOHS04 took advantage of using the course management system to supplement teaching functions within his face-to-face courses. Further, Dr. EOHS04 revealed that he began teaching ITV because he stopped all paper exchange from the face-to-face course to the campuses. Blackboard helped make this part a reality for Dr. EOHS04.

The most expedient thing for Dr. EOHS04 to do was to be fortunate enough to have much of his lectures recorded from previous years. He could now simply make the lecture content available to the students through the online course. He said:

If not having access to previously recorded material were not possible, I would have to go from a face-to-face course to an online course without the benefit of

those lecturers . I had already decided how important it was for students to hear my voice or learn me explain things. The old lectures really helped when it came to putting the course together.

In reflecting on the experience of the process and activities of how he developed and taught online courses, he revealed that in order to be successful at developing online courses, faculty must take the time to do the work themselves, in addition to understanding the complexity of what an online student learning experience entailed. To describe this experience, Dr. EOHS04 revealed:

My own personal thought – I’ve learned that to do this well you can’t just be a content expert, but you have to have a real understanding of what it is like being an online student and to relate to that challenge. You probably are not going to create a good online course if you depend on staff to take all the responsibilities for packaging content. I think I’m not saying you can’t create a good course. I’m sure faculty could create a decent course, however, I think that faculty who take the time to not just read the book, but learn how to use the software, understand the technologies involved, and are willing to explore new ideas for online learning activities, would be in a better situation because they are not just going to be handling content and looking at the results in terms of grading student evaluations.

Another major structure of Dr. EOHS04’s experience developing and teaching online courses was his experience and perceptions of support and being prepared to develop and teach online courses. When issues arose, he had limited support personnel

to provide remedies to his instructional design and or online course design needs. Dr. EOHS04 had access to personnel who had training in the use of technology in teaching and an understanding of learning methods, however, he felt like “he did not have a great deal of help.” He felt learning to develop online courses was largely in his ability to put the content into a form that could be delivered online.

In addition to support and being prepared to develop and teach online courses, Dr. EOHS04 participated in a workshop, but did not participate in the follow-up training exercises. Additionally, Dr. EOHS04 attended several national meetings in which people spoke about their online learning experiences and the different software that one could use. This was seen as useful to Dr. EOHS04. Also, to help him prepare to develop and teach online courses, Dr. EOHS04 did a great deal of reading relating to pedagogy and online learning. He said that this was useful in helping him to develop and teach online courses and to build his understanding of various online learning methods.

Dr. EOHS04 also revealed that support and resources were scarce at this particular school of public health and that he had to improvise and become creative when developing and teaching online courses. According to Dr. EOHS04, the school presented no barriers, however the school didn't provide anything in terms of support. Since he was in charge of the department that was to provide that support, he felt that it was not the school's fault, but his own, in which he has carried some guilt about. His office and small staff did in fact provide some support to the development of the earlier courses. While resources and support were limited, Dr. EOHS felt that the biggest challenge had always been finding sufficient time to develop the course.

In addition to support and being prepared with training and workshops, an additional element of the underlying structure that influence Dr. EOHS04's experience of developing and teaching online courses was his perception of information resources. Information sources in this current study were considered to be journal articles, books, websites, staff personnel and online course examples that related to developing and teaching online courses. Dr. EOHS04 revealed that informational sources such as journal articles, books, and websites were of no value to him in developing or teaching his online course. However, staff personnel and faculty development were considered to be very valuable and useful to the process and activities of developing and teaching online courses. When probing this component of the interview, Dr. EOHS04 revealed:

That talking to people was useful. We didn't even have online course examples. Being one of the first to develop online courses I couldn't go look at someone else's blackboard page. My assistant helped me to go out on the Internet and look at online courses that were out there. I certainly wasn't embarrassed to borrow other people's ideas or to see how they did things. I was unsure how to do. I had the help of the instructional designer and my assistant to answer my questions.

Another critical factor that influenced Dr. EOHS04 experience of developing and teaching online courses were the students. Students taking Dr. EOHS04's course, according to him, lack proficient levels of technology skills, possessed poor analytical and critical thinking skills, and had limited experience with online learning and course management systems. Often, Dr. EOHS04 found himself repeating course expectations,

assessment criteria, and where to find course documents. This did not sit well with Dr. EOHS04. He said:

I learned very quickly that it's important to tell them more than once and in multiple ways I'm not talking about understanding global warming, I'm talking about where you post for this particular assignment, where are the requirements for this assignment, and where are your expectations.

According to Dr. EOHS04, students who were confronted with course work from the beginning of the course, had to have the course laid out for them in the simplest way possible, where students did not have to exert too much effort in finding the information. He explained:

You know you have to make it very clear what the expectations are. I think that's the biggest challenge. What are the criteria I or my TA will use to evaluate their work? You need to put that in the word and spell it out and when you return an assignment to the own unique to specify which of the criteria they did well on.

The challenge for Dr. EOHS04 was not so much developing the online course or converting course materials into digital format, the challenge was to get students to understand how to navigate the course. Dr. EOHS04 said, "The biggest challenge is not getting the content in a user-friendly form but it's getting students to understand how to get through the course."

Based on Dr. EOHS04's experience dealing with this issue, he devised a scavenger hunt strategy to allow student to navigate the course and learn where specific

documents and information were located. This way, he revealed, shifted the accountability and responsibility back to the students. Dr. EOHS04 said:

What I'm going to institute starting this summer is a scavenger hunt as part of my first assignment. Basically it's a series of questions where students have to navigate the course and provide answers to fairly detailed questions. For instance when is this assignment due? Where did you find the criteria for the poster session? What is the topic of the example term paper provided in the assignment? So the student has to navigate the pages that make up my blackboard Pro form course and be able to answer these questions in the first week so they're not going to ask the stupid questions a month later I thought they knew the second day of class.

This experience having to "spoon feed" and "baby sit" students did not sit well with Dr. EOHS04. He mentioned that students attended a graduate school, not an elementary school; students were to behave, think, and act like graduate students. He often became frustrated and angered at students who repeatedly asked questions he felt they should have been able to ascertain for themselves. Patience, he described was not a gift he received, but one he needed to learn.

Another element of the underlying student structure that influenced Dr. EOHS04's experiences of developing and teaching online courses was the concept of social relationships and human connections. This component of the experience was very important to Dr. EOHS04. As a veteran faculty, he enjoyed the social interaction between student and faculty. He was able to learn the students, understand how their

personalities impacted the face-to-face course, and even was able to look at the students faces and change the course of his instruction as needed. However, as he transitioned to the online environment, his ability to develop and sustain a student to faculty and student to student relationship with the human to human personal interaction was now nonexistent. This troubled Dr. EOHS04 and left him with a feeling that he “missed” the personal contact with the students. According to Dr. EOHS04, this interaction was important. He described:

I learned that students can answer the material and never have to meet them or they you. I’ve learned that students miss to some extent the interaction with other students and are part of the assignments is to engage with other students and they are very happy about that and they miss the same things as the instructor does human interactions.

The final underlying structure that influenced Dr. EOHS04’s experience of developing and teaching online courses at this particular school was the school leadership and administrative practices towards instructional innovation. Dr. EOHS04 had strong reservations and feelings towards administration at this school of public health. Although he was part of the administrative team, he did not see himself as part of their “faction.” This “faction” in Dr. EOHS04’s opinion had a poor understanding of developing and teaching online courses and the infrastructure needed to support such activity. This was reflective in their decision making when it came to developing a support structure and matrix for online courses. Dr. EOHS04 said “Faculty and administration must decide if the school should invest in online teaching.” Dr. EOHS04

revealed that the school did not fully fund, promote, or support online courses. He explained that in 2005, when this particular school of public health decided to offer a certificate program and provide online sections of all five core courses, no one anticipated how students in all programs would rush to these courses. Administration did not have the foresight or strategy to properly plan for online learning. This was evident in the allocation of resources and support services. Dr. EOHS04 said:

We did not appreciate the resources needed to support course development and implementation. Nevertheless, these five courses were online in less than a year. Today, core online courses are oversubscribed every semester, and faculty must either turn away interested students or open added sections.

Based on this, it was evident that Dr. EOHS04 was not happy.

In addition, it is important to know that Dr. EOHS04 said that faculty need training and assistance transitioning from the face-to-face teaching environment to an online environment. To illustrate this point, Dr. EOHS04 said:

It is obvious that faculty need training and assistance in moving out of the classroom and online, so it goes without saying that the school must have an Office of Instructional Development or structure that provided online teaching and learning and instructional innovation support. To what extent, no one knows. Some faculty will prefer to develop the course content themselves, and other faculty will prefer having most of the conversion done for them. I would suggest that faculty considering teaching online should be screened just as we should screen students for online learning. Some will fit the existing resource scheme,

and others will not. This is especially true if the school cannot support the faculty member who wants to turn the job of creating the course to Office of Instructional Development staff.

According to Dr. EOHS04, the Office of Instructional Development must be supported by administration to define and enforce “best practices” for online teaching and learning.

To illustrate this point, Dr. EOHS04 said:

The OID must define and enforce “best practices” for online teaching at the school. This begins with screening the potential teachers as mentioned above. It ends with course evaluations involving faculty and OID staff. All teaching should be a continuous improvement process, and this is even more important for online teaching because direct interactions between students and faculty do normally occur. The evaluation process should apply to all modes of delivery and the methods of evaluation should be appropriate for the mode employed.

Further, Dr. EOHS04 explained that an OID must have some authority to regulate the array of resources made available to eager faculty and interface with administration to set policy to provide resources and other matrices of support. For example, Dr. EOHS04 said:

OID cannot provide access and training for every software product that catches the attention of faculty. The OID staff must be proactive with the authority given; they must evaluate new products, identify a suite of products that meet the needs of most teaching styles and provide training in the proper use of the

software. However, none of this can be done without the financial authority backing of administration.

This left Dr. EOHS04 feeling frustrated and powerless. This system of having a support office with no authority, no direction, or strategy led to roadblocks. Dr. EOHS04 revealed that school leadership can't be a passive force participating in the development and teaching of online courses, but must be active in the continual process of improving the operations of the school. Nevertheless, Dr. EOHS04 forged ahead with the development of his online courses.

In reflection of Dr. EOHS04's experience of developing and teaching online courses, his experience can be described as "a very positive experience." Although Dr. EOHS04 has had success with developing and teaching online courses, he saw this process as a rebirth, breathing new life into him and his work. He said:

Not everything I've done in any life professionally has provided me a greater amount of satisfaction. In theory I've always been uncertain of how I was in the classroom. I think I did okay. I think students responded well to my lectures, but as I get older and more tongue tied, the less energetic I became in my classroom performance. I was glad into move the online environment.

Discussing the importance of the online environment and how it helped to transform Dr. EOHS04, he said, "The online environment allowed me to continue my enthusiasm for teaching." Responding to my probe, he revealed that if he had to teach the course every semester face-to-face at this point after so many years, he just couldn't do it. He felt that he would feel a great deal of dissatisfaction with teaching in the

classroom. But now that he is developing and teaching online courses, the experience has been transformed from frustration to enjoyment. Dr. EOHS04 said, “I feel a lot more satisfaction than I would if I taught it face-to-face.” Though he mainly described how his practice has been transformed by developing and teaching online courses, he found that developing and teaching online courses was a valuable journey that he needed to take in order to help him grow as a faculty and as a person.

Summary

In Chapter IV, the participants’ textural-structural description of how they as public health faculty developed and taught online courses was presented. Next, in Chapter V, a composite of the textural-structural descriptions will be presented and a summary of the themes for roadblocks to public health participation in online teaching, and themes for intrinsic and extrinsic rewards for online teaching.

CHAPTER V

COMPOSITE TEXTURAL-STRUCTURAL DESCRIPTION: THEMES

Using a recursive approach to study the participants' transcriptions and the analysis for each one, the researcher constructed a textural-structural description of what and how the participants experienced developing and teaching online courses at this particular school of public health located in the Southwest region of the United States. When constructing the textural-structural description, the participants own language was preserved as much as possible, providing frequent quotations from the transcriptions. The textural-structural description is organized according to themes and description of the themes, which are summarized in Table 5. The researcher labeled three major themes and seven descriptions. The first major theme is the theme of fear and is labeled with four descriptions. The second major theme is the theme of transformation and is labeled with three descriptions. The third major theme is the theme of support and is labeled with three descriptions.

Although the researcher did not ask participants to dichotomize or divide their experiences into pros and cons, faculty who developed and taught online courses mostly described their experiences as particularly meaningful or as particularly meaningless or what was viewed as a challenge or a favorable situation. Because the large majority of descriptions were portrayed positively or negatively, the researcher found it useful to separate the textural-structural descriptions of faculty developing and teaching online courses into the categories based on themes and attributes.

Composite Textural-Structural Description: Experience Themes

Theme One: Rhetoric of Fear

Fear, as described by the participants was to be afraid or apprehensive about a possible or probable situation or event. Participants experienced fear in the process and activities of developing and teaching online courses. They described their fear in terms of being apprehensive to new experiences brought on by their lack of experience and preparation developing and teaching online courses.

Table 5: Summary of Textural – Structural Thematic Descriptions

| Themes | Descriptions |
|------------------|---|
| Rhetoric of Fear | Apprehension due to Lack of Preparation Fear of the unknown Fear of interpersonal intimacy and relationships of students Safety |
| Transformation | Transformation of Thought and Intellectual Capacity Transformation of Instructional and Pedagogical Practice Transformation of Identify and the Concept of the Faculty Self |
| Support | Instructional & Organizational Support Faculty Development and Training Resources |

When experiencing fear or apprehension, participants described their lack of experience to develop and teach online courses as a source that stimulated their fear. They described developing an online course as a “painful, time-consuming process” that made the process and activities of developing and teaching online “daunting” due to the amount of work that lie ahead. Dr. EPI01 said “I knew it was going to be an enormous amount of work; I felt inadequately prepared; I had never even used Blackboard, so my expectations were a combination of excitement, dread, and fear. I thought to myself how am I going to get this done.” Likewise, she also stated that “It can be a bit scary learning a number of new things.” Similarly, Dr. HPBS005 described her lack of experience and preparation developing and teaching online courses that contributed to her apprehension towards developing and teaching online courses were as follows:

I was really very fortunate not to have to start from scratch. Because of course I really knew nothing. I never even logged onto Blackboard prior to – I guess fall of 07, I never even logged on – my secretary would do it in Minnesota. It was really a whole different way of approaching things. So she or my graduate student would post things online. They would do all of that. So I pretty much didn't know anything.

Further, describing fear brought on by the lack of experience, being prepared, or the assurance from school leadership and support personnel, Dr. BIO01 said:

My lack of training and support for reassurance left me to spend much of my time developing and teaching these online courses without any guidance or

support. This made him feel like I was not developing the online course correctly. I felt that administration left me to be alone in this endeavor.

A second component to Dr. BIOD01s' experiences of fear dealt with administration. He said:

Administration does not support online course development efforts, therefore I for one became apprehensive, once I figured there was little to no support offered. I did it all by myself, not knowing the outcome."

Dr. EPI01 described a similar experience relating to the lack of reassurance for course development, saying "I oftentimes find myself second guessing if I am doing something right or wrong. I don't know how the course will come out." Likewise, when experiencing unknown outcomes of developing and teaching online courses Dr.

EOHS04 perceived a similar experience, saying, "the feeling of being unsure as to how the online course would turn out or if the quality of the course content would diminish lead to being apprehensive of developing online courses."

When experiencing fear the process and activities of developing and teaching online courses Dr. EOHS04 said "I still have fear that I will not be able to do a good job developing or teaching online because I was not formally trained." Dr. EOHS04 also said "I had some concerns about making it [the online course] work in the sense that students could understand what I was trying to teach them to an online interface. This was a fear of mine." Conversely, Dr. EOHS03 said "lurking in the back of my mind is the fear I would fall behind and that I wouldn't be able to catch up."

Dr. EOHS03 described fear in the process and activities of developing and teaching online courses relating to safety brought on by the lack of interpersonal intimacy and relationships with students. He said:

All that was interesting [developing and teaching online courses] but it taught me to blame the personality of the person not necessarily seeing their face, however I then came back to Houston and within the first few weeks the students would stop by and of course I didn't recognize them, but they recognized me and that always worried me. You know, I have an office that has one door and there's nowhere to escape. They could corner you and you didn't know if they were going to kill you or not.

In summary, participants experienced fear as a byproduct of their lack of experience and being ill-prepared to develop and teach online courses. This fear manifested itself in how participants felt in regards to support, training, technology, and safety. This is evident by the description of fear they experienced in the process and activities of developing and teaching online courses at this school of public health. In brief, participants experienced fear as being part of the experience navigating through the process and activities of developing and teaching online courses, while trying to come to grips with this new modality of teaching, learning, and ultimately the environment.

Theme Two: Transformation

Transformation, as described by the participants involved an act of change or that of a metamorphosis. Simply stated, transformation dealt with undergoing a change.

Participants experienced transformation in the process and activities of developing and teaching online courses as vital to their experiences developing and teaching online courses. Participants described their transformation in terms of enlightenment, brought on by the process and activities of developing and teaching online courses. This took place in three forms:

1. Transformation of thought and intellectual capacity;
2. Transformation of instructional and pedagogical practice; and
3. Transformation of identity and the concept of the faculty self.

Transformation of thought and intellectual capacity. When participants experienced a transformation of thought and intellectual capacity, there was a shift in previous assumptive thinking of online learning based on negative depictions and biased opinions of online learning. However, as participants moved through the process and activities of developing and teaching online courses, their thinking changed as a result of their experience and involvement in the activities of developing and teaching online courses. In depicting transformation of thought and intellectual capacity as it related to developing and teaching online courses, how their perceptions of online learning evolved, and how transformation influence their ability to develop and teach online courses, Dr. EOHS04 said:

Well, I was skeptical of whether online courses could provide a comparable or engaging experience for students and when I.... With that in mind when I developed my own online course I rely on and continue to rely on lectures that were recorded in the classroom. I felt that what I had to say was so important

that students get to hear it and could not be sent to a reading in other learning activities and be expected to know what I thought was important about the topic and understand it insufficient depth. So that was one apprehension I had. Again my beliefs were that it probably wasn't as good. How did that change. Well, I was wrong although my delivery of the course material has been changed greatly in the last five years. I learned that students can answer the material and never meet. I've learned that students miss to some extent the interaction with other students. This is part of the assignments to engage with other students. They are very happy about that and they miss the same things as the instructor does human interactions. I learned that and this is my own personal thought - I've learned that to do this well you can't just be a content expert but you have to have a real understanding of what it is like being an online student and to relate to that challenge. You probably are not going to create a good online course if you depend on staff to take all the responsibilities for packaging content.

Similarly, in the process and activities of developing and teaching online courses, Dr. HPBS05 experienced a transformation in her assumptive thinking from having a negative, low expectation of developing and teaching online courses to a more positive outlook. She said:

I think I thought that it was I didn't know – I sort of looked down on it, that it was I don't know like the kind of course you would send away for that you would read a whole bunch of materials and take tests, that's kind of what I thought it was going to be. I didn't realize that it would be multifaceted and

interactive. You know I had no idea, I just thought I knew that a faculty course went well so I thought I would give it a try and then I actually I sort of had low expectations. I thought the students would just read stuff. So I would say I have really low expectations and then I was pleasantly surprised.

Likewise, in the process and activities of developing and teaching online courses, Dr. HPBS05 described her new transformed positive thinking about online teaching and learning brought on by the process and activities of developing and teaching online courses. She stated:

So far developing and teaching online has been overwhelmingly positive. You know I didn't go in thinking it would be positive. In both years I've taught it, I get good evaluations and students have said that they have never had as much of personal attention in the class. I think that is kind of cool. Online, they are sort of forced to and you can respond – you can bring out the shyer student- that is good – there's lots of opportunity for online. I think it's a lot more work than a face-to-face course.

Dr. EOHS04 described a similar positive experience of how his assumptions of online learning were changed as a result of developing and teaching online courses. He said:

It [developing and teaching online courses] has been a very positive experience. Not everything I've done in my life professionally has provided me a greater amount of satisfaction. I've always been uncertain how I was in the classroom. I think I do okay. I think students respond well to my lectures, but as I get older and more tongue tied the less energetic I am doing my classroom performance. I

was glad to move into online environment because it allows me to continue my enthusiasm for teaching the course here. I think if I had to teach the course every semester face-to-face at this point after so many years I just couldn't do it. I would feel a great deal of dissatisfaction with myself. But now that I'm doing the course online I enjoyed. And you enjoy the technology and learning the technology. I feel a lot more satisfactory than I would if I taught it face-to-face.

Conversely, Dr. EPI01 experienced a transformation of thought and intellectual capacity relating to developing and teaching online course as:

It [developing and teaching online courses] was actually a painful, time-consuming process, but it was also gratifying, creative, and rewarding after the initial work was done. I believed it was possible, but I was unsure how it would turn out, or if the quality of the course would diminish. In retrospect, I did enjoy the course, and believe that this course was actually improved by the online format, by the greater reach to more students, an unexpected feeling of rapport, respect, and active participation among the students, and by the nature of the format, a greater range of topics. I actually enjoyed the experience much more than I originally thought, and thought it was better than teaching it by ITV. I've discovered it as a work in progress, and I will be working on modifying/improving/updating materials each year.

Likewise, when experiencing a transformation of thought and intellectual capacity relating to developing and teaching online courses, Dr. BIO01 felt like "Online courses were a new and refreshing challenge to keep me thinking and keep the enjoyment of

teaching fresh, and that hopefully would also benefit the students learning.” Further describing a transformation of thought and intellectual capacity relating to developing and teaching online courses, Dr. EOHS03 emphasized the stimulation of the process and how it re-energized him for teaching. He said:

So it [developing and teaching online courses] was an interesting challenge and frankly for a number of years I have to admit that I wasn't stimulated in terms of new course development using traditional formats and this presents an opportunity to do that and so I took it. “The first time I read about online teaching I was interested. It held a lot of promise and after I was done with it I was convinced. I didn't go into it with a negative attitude. I had a very positive attitude after the experience I came out of the experience with that attitude reinforced. The expectations...Once I read up a little bit and talked to the instructional design team about what this would entail. I began to be excited about using novel approaches to teaching. The expectation was that I would be able to develop a course that would be exciting to me as well as to the student and involve a number of new formats for learning – you know new activities, experiences, etc. It was really fun. I look forward to it. There came a point where doing all my other work became an interference, because what I wanted to do was develop the online course because I was having fun doing it. I don't think my patience appreciate it.

Transformation of instructional and pedagogical practice. When participants experienced a transformation of instructional and pedagogical practice, there was a shift

from traditional didactic methods to instructional and pedagogical methods suitable for online learning and its associated learning environment. In depicting this transformation of instructional and pedagogical practice, Dr. BIO01 felt like “I learned and benefited from the ever increasing technology to enhance the educational experience for the student and for effective teaching.” Further, describing his experience in the instructional and pedagogical transformation process, he said:

I was gradually moving in the direction of web based learning in my in-class teaching; that is employing basic online learning skills. In the past I had developed “learning by objectives” and distance education packages many years earlier, in improvement of vital statistics systems and program evaluation, for two examples. Thus I felt I knew what I was getting into in both the positive aspects and also within the context of challenges.

Dr. EPI01 described a similar experience of the transformation of instructional and pedagogical methods, saying:

It [developing and teaching online courses] was actually a painful, time-consuming process, but it was also gratifying, creative, and rewarding after the initial work was done. I would have started earlier, although in truth, sometimes I have to prioritize other deadlines, then devote some concentrated time to this effort [developing and teaching online courses. I had to plan everything much more in advance, incorporated only one guest lecture (as opposed to many), and had to think through in greater detail the materials and scope of the entire course. I developed learning objectives for each module, so I had to think through the

purpose and desired skills for each module. Overall, as many online instructors learn, the amount of time spent online responding to students, grading, developing materials, etc. is greater with online than in-class teaching. My greatest benefit is about to come, as I am about to teach it for the second time this summer. It will be so much easier to work on enhancement/improvement than in overall development.

Likewise when experiencing a transformation of instructional and pedagogical methods relating to faculty and student understanding, Dr. EOHS03 said:

Both faculty and students must understand that, at least at the beginning, this [developing and teaching online courses] is going to require more up-front work and definite changes in their time management. I was very fortunate for two reasons: 1) I was able to design and develop my course starting one full year before it was implemented, which allowed me to become more grounded in online instruction design theory, and 2) I was mentored ably by two persons at the School of Public Health, through regular meetings and assignments, that allowed me to develop my course based on a fairly solid theoretical foundation.

Further describing his experience in the instructional and pedagogical transformation process, he said:

I took it on as a challenge and a the combination of factors led me to do it and from talking to you and others I did understand and from talking to students it was just a matter of posting PowerPoint on blackboard and hoping for the best

however it is actually going to involve some fundamental changes in approaches to teaching and learning.

In addition, Dr. EOHS03 said:

I have to admit, doing the online course twice and face-to-face at least helped me with the content and with the learning objectives. I was essentially going to give the same content. So that actually saved me a lot of time. But what I have to do was take that content and design learning activities around them. It [developing and teaching online courses] allowed me to think through the building blocks of the course. You know in graduate school, we never had any formal training in teaching this allowed me to do that – mapped it out in a series of sequential didactic modules. That began with giving students facts and knowledge about environmental and occupational health sciences. So I can get them all up to the standard and so as my progress we transition from feeling there is with facts and stuff to more analytical type approaches problem-solving and solving questions and giving policy questions at the end. I had a semester long longitudinal module that was a course project that tried to integrate what they were trying to learn in the four sequential modules. This was a transformation of a face-to-face course to online. The content is largely there – having said that the activities had to be changed – the way in which the content was delivered had to be changed and greatly adapted to an online format. So there were a number of changes, but what helped was the fact that I had done a face-to-face and it was the first time.

Moreover, when describing his experience developing and teaching online courses and the transformation that took place instructionally and pedagogically and how the process helped to improve his face-to-face teaching, Dr. EOHS03 said:

This experience [developing and teaching online course] also allowed me to introduce the online element into my face-to-face courses I had taught. For example I teach a clinical occupational medicine course via instructional television where we teach general clinical topics and traditionally we've done the traditional listen to the lecturer, exam and etc. The online course and web-based case study in this course this past semester on top of the traditional format have helped and that was cool fun and easy to do. It also allowed me in this traditional face-to-face format to move some stuff I had been doing face-to-face and using some of the online applications; so for example I used to always get a review session for the test before I give them the test. Now I do a PowerPoint narration and then I let them ask me questions on the discussion board rather than using an entire class edition to review. So now all of that is online and I have not heard any complaints to the contrary. They liked it. The online experience has helped improve my face-to-face teaching.

Lastly, when describing his experience developing and teaching online courses and the transformation that took place instructionally and pedagogically based on the time and work investment needed for the process, Dr. EOSH03 added:

Online teaching offers a wealth of opportunities, but you've got to take the time upfront in the beginning to create enough and allow enough time to become

versed in the theory and activities. I love it, and learn on the job but spending a few weeks reading about the theory, the framework, looking at sample courses. It is really helpful because then that unleashes your own creativity rather than if you do it in a rush. It has tremendous potential, but you got to pay attention to the base and grounding of what it's all about. Personally, I had a blast developing the course – more fun than in many years.

Identifying a similar experience with the instructional and pedagogical transformation process, Dr. EOHS04 revealed much about changes to course content presentation. He said:

I enjoyed the new challenge of repackaging the content from an existent course for online delivery. I'm sure that my fascination with hardware and software technologies and the ability to work on this endeavor from home after normal office hours contributed to this experience. I think the first element was to move a significant part of the content so that it will work on blackboard. Most of the activities that we now do in the online course can be traced back to something in the hybrid course, where content with sitting out there and the majority of the face-to-face or ITV activities were part of the blackboard exercise, and students could move their term papers to blackboard so on and so forth. All of the content was either in the textbook or a blackboard page. So the transition from a face-to-face course to, one where there is now a paper exchange, to where we don't see the students anymore, took place through the hybrid transition. So that probably

began in teaching ITV because I stopped all paper exchange from the face-to-face course taught to the campuses. So that would be back in 2001 to 2002.

Likewise, when experiencing the instructional and pedagogical transformation process as a result of undertaking the process and activities of developing and teaching online courses, Dr. EOHS04, perceived the student as being a factor. Illustrating this point, Dr. EOHS04 said:

I didn't think the student would be changing. What a big change if students would work better, if they were asked to adjust to an online learning environment, and so I gave it some thought. What is it students in this environment would need to do differently because it would involve personal interaction of faculty or other students. That was certainly one of the considerations.

When describing the instructional and pedagogical transformation process as a result of developing and teaching online courses, Dr. HPBS05 said:

I was really very fortunate not to have to start from scratch. Because of course I really knew nothing, I never even logged onto Blackboard prior to. I guess fall of 07 I never even logged on – my secretary would do it in Minnesota. It was really a whole different way of approaching things. So she or my graduate student would post things online. They would do all of that. So, I pretty much didn't know anything. I had no idea. I just thought I knew that a certain faculty's course went well, so I thought I would give it a try. I actually I sort of had low expectations. I thought the students would just read stuff. She [the

faculty whose course was used] had some very nice power points and I didn't realize the discussions were such an important component and that was where I would be doing a great deal of teaching in the discussion. I didn't really know about online or online test and how those worked or how students really studied for those. So I would say I have really low expectations and then I was pleasantly surprised. I think the discussion boards are essential. It really takes the course to teaching instead of just looking for information- you can do a Google search and almost get the same information.

Dr. HPBS05 also portrayed her experience in the instructional and pedagogical transformation process as a result of developing and teaching online courses as "lucky".

She said:

Well, I think I was just lucky in taking a faculty course and seeing all the different things she did with that. I'm now thinking through how to add more video – the students seem to like little clips. Students in the class create the last five modules (five weeks of the class) so around particular topics they come up with some really cool topics/ideas. They really like little video clips they find that relate to the topic. They like different points of view as opposed to in a lecture you may give your point of view, but they like to read different points of view and may get into a debate online. So I think there are a lot of possibilities as I worked through it as my time permits. I could add on to the online format.

Transformation experienced by participants in instructional and pedagogical methods can be described as a new and refreshing way of teaching, in addition to being a

benefit, time consuming, rewarding, fortunate, lucky, significant, and important. These elements used to describe the transformation process were indicative to the process and activities of developing and teaching online courses.

Transformation of identity and the concept of the faculty self. When participants experienced a transformation of identity and the concept of the faculty self, there was a shift and an evolution in how faculty saw themselves and their role as faculty, while in the process and activities of developing and teaching online courses. However, as participants moved through the process and activities of developing and teaching online courses, their thinking about their role as faculty changed, as a result of their experience developing and teaching online courses.

In depicting transformation of identity and the concept of the faculty self as it related to their role as faculty in developing and teaching online courses, participants described this transformation of identity and the concept of the faculty self as a shift from the “sage on the stage” to that of a “facilitator.” Dr. EOHS03 describes this new shift in order to be successful developing and teaching online courses. He said “Faculty must successfully transition (and accept) from the traditional “sage on the stage” format, teacher-centered, to more of a facilitator role (student centered).” In describing this experience, Dr. EOHS03 said:

With developing and teaching online courses, faculty in public health will have to evolve into a new role. No longer can faculty use traditional means of teaching. With online, you have to design the course, then develop the course, then revise and manage the course, then you have to learn technology and the

course management system, and then master the discussion board and use it well.

This will require more time, more energy, and more patience.”

Dr. HPBS05 emphasized this role while teaching online courses and utilizing the discussion board. She said:

I felt like it was really important to me as an instructor to stay on board in the discussion board and be really on top of what they were doing in teams and so forth and as I said the first six weeks especially, to just keep on top of it because if you just put it out there your course and at the end see what went on – it’s not a course. I know a lot of people are thinking in that way that we should just put the courses online and they would be sort of self generating and you know that you finish it – then that would be teaching as far as I am concerned. You really have to learn how to manage this new style of teaching.

Moreover, Dr. HPBS05 described the new faculty self in terms of connecting with the students and providing feedback and constructive comments for teaching public health online. She felt that “faculty would have to let go of the idea that you have to see the student in order to know that they have learned.” Illustrating this point, she said:

I found out that I would spend a lot of time the first six weeks of the course and a lot of time in the discussion board and made sure I would respond to all of the posts people would put on and really spend time – I ended up spending 2 to 3 hours a day doing that so that when I was instructing, I felt that I could connect with the students. So I was afraid I would not have that connection, but I found the discussion board I didn’t need to see them to have a connection.

Dr. BIO01 described a similar experience and felt that faculty needed to change with the times and with the new age of teaching, brought on by the digital age. He said:

Faculty in public health can no longer see themselves as the expert giving information to students, but more a guide, showing students where the information is, how to understand it, and ultimately collaborating with the student on how to use it.

Dr. EOHS03 emphasized understanding the complexities of the new role as faculty developing and teaching online courses and that faculty could not accomplish the task of developing and teaching online courses on their own without realizing their new role. He felt that now faculty would have to “design” learning environments, instead of “having” instructional environments. Illustrating this point he said:

Once I understood that this was going to take a lot of pragmatic shifts both in my role as a teacher as well as the students as learners, I realized it was a lot of work. The one thing that helped the most was working with the instructional design team on fixed schedules.

In brief, participants experienced a transformation in their role as faculty in developing and teaching online courses. Indicative of this new role were course designer, course developer, course manager, knowledge facilitator, and assessor.

Theme Three: Support

Support, as described by the participants was to give moral or psychological aid or an activity of providing for or maintaining by supplying with money or necessities. Participants experienced support in the process and activities of developing and teaching

online courses in a variety of ways, most notably in a negative fashion pertaining to (in order of significance):

1. Instructional and organizational support;
2. Availability of quality resources; and
3. Faculty development and training.

Each participant described their experience with support in the process of developing and teaching online courses as nonexistent, minimal, token, not of real value, and unsupportive; while some had a positive outlook and described support as, helpful, important, critical, crucial, and needed.

Instructional and Organizational Support

One of the central themes that emerged from the participants' narrative from their experiences developing and teaching online courses at this particular school of public health was the theme of support. Participants described their experiences with support relating to developing and teaching online courses as a challenge faced in the process. These challenges included ill defined policies as to who were screened and selected to develop and teach online courses, procedures on how to find support and or technical assistance, lack of incentives or a policy for incentives such as release time to develop the online courses, inadequate resources to improve skills, or no real support office to handle instructional design coaching for online learning, or personnel.

Overwhelmingly, participants felt that in order for them to develop and teach online courses, there had to be policies that would help facilitate positive work interactions that supported or assisted in their work of developing and teaching online

courses, instead of being roadblocks and barriers. Participants indicated they were more likely to develop and teach online courses, if they had departmental and peer support, incentives, cross collaboration with other faculty, mentorship from other faculty who were skilled in developing and teaching online courses, and having access to staff personnel that could assist in the development of online courses. Participants also indicated that if there was a recognition program in place to attract and motivate faculty, this would help to attract more faculty develop and teach online courses.

Others indicated that the school's organizational culture and faculty culture must change and be accepting of developing and teaching online courses. Participants illustrated these challenges very clearly in their narrative. A narrative from Dr. EOHS04 detailing lack of support from administration:

I can look back on my duties developing and teaching online activities and wish I could make things better and different and spend more attention to them. None of the prior administration at this school provided resources or support to the academic teaching part of the school at all. We have a token office. There was some attention given to upgrading the visibility of that position and increase those responsibilities and so forth. But no budget came with it. Very little assistance came with it. Expectations from administration weren't clear. I never had any authority nor was the director of the office given any either.

Dr. EPI01 described a similar experience relating to support for the regional campuses. She said:

More support for regional campuses would be helpful. It's difficult not having access to the main campus's resources and personnel. Some of the workshops provided some great ideas, but it would be nice to have a few translated for us, with specific examples—the opportunities and technology get overwhelming. A similar experience relating to support can be found in the experience of Dr. BIO01, particularly relating to personnel changes and organizational disconnect to policy and rewards. He said:

Early on, there was among the “disconnects” from the promise, rewards, and the actuality. This is normal for systems I guess. Also, uneven access to help and personnel changes leave lapses and thus no support.

Another important finding relating to support was that participants perceived a lack of organizational commitment from administration. This is illustrated from the following expert from Dr. EOHS04:

Faculty and administration must decide if the school should invest in online teaching. We did not anticipate the resources needed to support course development and implementation. It seems obvious that faculty need training and assistance in moving out of the classroom and online, so it goes without saying that the school must have an Office of Instructional Development.

However, I don't know what level of support is appropriate. I would suggest that faculty considering teaching online should be screened just as we should screen students for online learning. Some will fit the existing resource scheme, and others will not. This is especially true if the school cannot support the faculty

member who wants to turn the job of creating the course to OID staff. The OID must have some authority to regulate the array of resources made available to the eager faculty. For example, they cannot provide access and training for every software product that catches the attention of faculty. The OID staff must be proactive; they must evaluate new products, identify a suite of products that meet the needs of most teaching styles and provide training in the proper use of the software. School administration needs to be committed to effective online support and to the faculty who develop and teach online.

Dr. EOHS03 shared a similar experience that speaks to the support:

Administration should make sure that as they are calling for more online courses that they go beyond advocating for those types of courses because they result in increased student enrollment and increased tuition based formula funding. That they go beyond that and understand what opportunity that offers as long as it's done well. I'm saying that if administration is going to encourage us as faculty to do more online courses than they need to have enough understanding of what online teaching is and allow the faculty to develop these courses the right way. And that means ample time up front getting faculty at the time to be grounded in the theory of online teaching and give them enough time to develop the courses. So otherwise you were going to get what you get which is I'm going to post my PowerPoint and posting an exam and that's not online teaching.

The narratives outlined suggest that this particular school of public health should provide faculty with support, but also reward and encourage faculty to develop and teach

online courses. Many of the narratives from the participants revealed that they enjoyed teaching online and learning new ways of teaching that would reach all students; however, with the current environment for developing and teaching online courses at this particular school of public health, participants would be less likely to actively participate and would find ways not to. While participants noted that developing and teaching online courses was found to be stressful, daunting, and time consuming, the process became further complicated and difficult with little organization support. Dr. BIO01 felt that “often his voice of concern was left on deaf ears.” He explained:

There was not time allowed to pilot test the material. When I asked for one semester first to do this develop-pilot test revise- then implement- it was rejected out of hand. When I pointed out this was not consistent with either good curriculum development or even good methodology, this was met by an expletive, and was told “move on with it.

For some, developing and teaching online courses at this particular school of public health was clearly a complex activity. However, the level of complexity was heightened when participants did not have support. This left participants feeling frustrated.

Availability and Quality of Resources

Another component of the theme that emerged from the narratives of participants who developed and taught online courses at this particular school of public health was the availability and quality of resources, both in terms of technological tools and in staff personnel. Analysis of the qualitative data revealed that resources included current

hardware, current software, the availability of peripherals, instructional technology, and design support, funding, books, articles, websites, and positive reinforcement and assurance. Participants indicated that in order to develop and teach online courses, administration should provide and ensure a means of instructional design personnel. While participants agreed that support was important, it was the resources theme relating to staff personnel that became another major factor that influenced the participants' ability to develop and teach online courses and thus their experience. This can be illustrated in the following narrative from Dr. HPBS05 who said:

I relied heavily on another faculty before and since then. I'd rather talk to somebody when I have a problem – have someone come – like when there is a new application in Blackboard – a seminar on that or have someone send me something and say check this new application out. Or you can do such and such. That would be more interesting to me. Printed resources aren't usually that helpful.

Dr. EOHS03 shared a similar experience that spoke to staff personnel as a resource. He said:

I didn't actively solicit any help other than the instructional design staff at the school. The one-on-one instructional training provided from the instructional design staff was very helpful. I do consider the school given access to resources – the instructional design staff was a resource. But obviously if the instructional design team hadn't been at the school, I would not have had access.

A narrative from Dr. EOHS04 illustrating the significance of staff personnel as a resource:

Basically talking to people. We didn't even have online course examples. Being one of the first to develop online courses, I could go look at someone else's blackboard page. I needed help and my secretary helped me do this, which was to go out on the Internet and find online courses that were out there and I certainly wasn't embarrassed to borrow other people's ideas or to see how did they did things I was unsure how to do. And of course I had the instructional design staff to help me.

Dr. HPBS05 shared a similar experience that spoke to staff personnel in the form of a TA or teaching assistant as a resource:

If I had to start from scratch then it would have been a huge challenge. Starting with a model is so much better. So if people could be given extra money or hire and really develop – because it's so much work to do, then I think people could go from there. I think that it is what the faculty who I used did. She had a really gifted TA to develop the class. I think that is really helpful. Also, make sure there is a TA for these classes. Because the TA can troubleshoot, do the grading, and other things. So to do it without a TA is kind of tough. So a TA in this case is important – just to keep feedback going on participation.

In reference to text-based resources, Dr. EOHS03 found websites, journal articles, and books to help as he developed and taught online courses. This was found to be significant in the process. He said:

“Journals, books, websites, staff personnel, all of the above were valuable. The books you gave me and you know after a certain point of reading about what was out there, I did use the Internet a lot to search for material and novel ways in delivering content and seeing what was out there. I would pose a question on global and see what was out there. I read a lot of articles with some, but moved away from that because it was a lot more fun to play around on the Internet. The articles were kind of boring and you know the book you showed me could have been given to me a year ago. The one you just gave me a month ago by the guy who came to visit, but that book was very good. It’s a very thoughtful book and actually when I say I should’ve stated earlier but I don’t know - I think I can appreciate it much more now that I’ve done this once. In terms of reading, when you are new to this all the activities may sound the same to you, cause they are foreign, so you go read a book and some of them come to reassure you that hey you know someone else has tried it. I really liked the book a lot.

Faculty Development and Training

An additional component of the theme that emerged from participants’ narratives relating to their experiences developing and teaching online courses was the issue of faculty development training in both formal and informal settings, with emphasis on more informal one-on-one instructional coaching. Formal settings as described by the narratives were formal, organized, workshop training sessions where groups of individual could attend, while informal training sessions were more of a one-on-one instructional coaching. In addition, informal training sessions also included self directed

learning opportunities where faculty participants could learn on their own. Participants concluded that faculty development and training was necessary to the process and activities of developing and teaching online courses. This would help prepare participants for the challenge. As described from participants' narratives, faculty development and training topics that were found to be important to the participants can be divided into three broad categories:

1. Technology tools;
2. Instructional design; and
3. Pedagogical and teaching practice.

The technology tools category dealt with the training and development of various software packages and hardware peripherals. The software included the Blackboard course management system, Camtasia, Captivate, Flash form, and other software tools used to package course content. In addition, this category also involved training faculty on not just the mechanics of the functions of the software program, but how to use the technology tools to package and distribute content via the Blackboard. This can be illustrated in the following narrative from Dr. EPI01 who said "I had to have a crash course in learning new technology—Blackboard, Camtasia, and online teaching and learning issues."

Dr. EOHS04 described a similar experience with formal training. He said:

One of the instructional designers put together a summer training course that you are familiar with for training faculty. I participated in the workshop, but I didn't participate in the follow-up training exercises. I did understand it well enough to

do that.” As I’ve said, the workshop that was organized was a good experience.

I also attended the national meeting in which people talk about their online learning experiences and different software that they use which was useful.

That’s about the extent of my formal training experience. It was needed.

However, informal training sessions were seen to be of value and preferred over the formal training and development sessions. This can be illustrated in the following narrative from Dr. HPBS05, said:

I think other than one of the instructional designers coming for a lecture and showing us Blackboard that was it. So nope, I just got online and started learning. Then I think that is how most faculty are doing it. I know there are modules, but I also asked people and the students are the ones oh and the faculty who I shadowed to learn how to develop and teach online courses had a teaching assistant. The teaching assistant had been the TA for the class for I think three semesters and she volunteered to be my TA for the first semester. So if I had any questions I could just ask her. So the students knew more than I did – such as how do you enter the grades. She knew all that. So it was really good cause you’re doing it while you need it. It was great

However, when probing this experience for further insights, Dr. HPBS05 revealed that she did not invest in any formal training courses at this particular school of public health to learning about developing and teaching online courses. Most of her experiences in learning about an online environment has been in an informal setting. This is illustrated with the following narrative: “Other than the instructional design support person coming

to visit us it has been self taught or informal.” Dr. EOHS03 had a similar experience and narrative concerning informal training development. He said:

The one-on-one instructional training with the instructional design staff provided was very valuable. I do consider it a school given the access to resources – the instructional designers were a resource. But obviously if they hadn’t been at the school I would have not had access. The school did provide me access to the instructional designers.

When probing this experience for further insights, Dr. EOHS03 also revealed that he did not invest in any formal training courses at this particular school of public health to learn about developing and teaching online courses, instead, he being a self directed person, learned on his own. He said:

Nope I think a one-on-one instruction coaching with the instructional designers were informal instruction... As I said, they would give me homework exercises, but the software it was really trial and error and that’s how I like a learn software.

Dr. EPI01 had a similar experience and narrative. She said:

I would say that my training opportunities were more informal consultations with an instructional design and other faculty. The only formal training was a Blackboard session held by the instructional design, which was very helpful, and I had some helpful notes. As noted above, I took advantage of informal consultations with the instructional designer and other more experienced faculty, and then I got assistance with IT for Camtasia, as well as talking to students who had taken online courses.

Although, participants at this particular school of public health saw formal and informal faculty development as helpful, some participants had mixed emotions. Dr. EPI01 had mixed feelings concerning faculty development and training. Although the formal workshops were helpful and had value to her, the informal sessions were better; however, she indicated that more support for the regional campus and having specific workshops tailored to the regional campuses would be even more helpful. This can be illustrated by her experience and narrative. She said:

More support for regional campuses would be helpful. Some of the workshops provided some great ideas, but it would be nice to have a few translated for us, with specific examples—the opportunities and technology get overwhelming.

Similarly, Dr. EOHS04 had a similar experience and narrative. He said “I hate to sound very arrogant but I don’t feel like I had a great deal of help. Training was not that plentiful.

Participants saw faculty development and training as critical to the process and activities of developing and teaching online courses, whether it was formal or informal. Additionally, training in pedagogy and teaching was also essential to the process of developing and teaching online courses and helping faculty grow as teacher in both an online and in a face-to-face classroom. Dr. EOHS04 revealed that faculty did not have formal training in how to teach or methods of teaching. This is illustrated with the following experience narrative:

It’s assumed for whatever reasons that everyone walking in with a PhD and their name next to a course can be an effective teacher without any training. I doubt

that any of our faculty have had instruction in pedagogy and teaching. You basically walk in a classroom and do what you saw your instructors do in the past. So when we think about preparing faculty to teach online many of those skills all faculty should have. Though our concept of providing faculty development and support for teaching might begin with online, most don't know what they are doing and should be teaching. It should be improved across the board.

Moreover, according to participants, faculty development should be a planned process for developing an individual or organization into a more effective force to accomplish its desired goals. In this case the goal was to facilitate quality teaching and active student engagement through online teaching and learning. The narratives also indicated that opportunities for developing faculty into pedagogy, online learning methods, and technology tools were paramount to the mission of developing and teaching online courses. Participants, also indicated that they would be more inclined to develop and teach online courses, if they were given guided intermittent practice, examples, and remedial support in using tools, in addition to teaching strategies.

Illustrating this point, Dr. EOHS04 said:

If we are to be successful at developing and teaching online courses, faculty should be presented with opportunities for high quality, intermitted faculty development and training that is aligned with the organization policies and is readily available and assessable.

Composite Textural-Structural Description: Roadblock Themes

Themes associated with roadblocks for developing and teaching online courses were divided by its activity, first developing online courses followed by teaching online courses. Themes associated with roadblocks for developing online courses are organized according to classification types and barrier types and are summarized in Table 6. The researcher labeled five theme types and fifteen roadblock descriptions for developing online courses at this particular school of public health.

Table 6: Themes and Description of Roadblocks for Developing Online Courses

| Theme | Roadblock Attribute and Description |
|----------------|--|
| Psychological | Assumptive thinking regarding online learning Fear and apprehension of change Fear of the unknown and of uncertainty Fear of safety and loss of social interactions |
| Organizational | No connection to policy/organizational fit Lack of rewards/incentives Lack of training opportunities Lack of resources and personnel support Faculty role and responsibilities |
| Technical | Issues with the course management system Issues with hardware and software Learning new technology tools |
| Instructional | Instructional design Student technical knowledge and skill |
| Time | Not enough time to develop online courses |

Themes Associated with Roadblocks for Developing Online Courses

The first theme within the roadblock umbrella is the psychological roadblock and is labeled with the description of assumptive thinking regarding the nature and quality of online learning, fear or apprehension of change or willingness to change, fear related to the unknown, fear of uncertainty, fear of safety, and the fear of the loss of human contact and interaction. The second theme under the roadblock umbrella is the organizational roadblock and is labeled with the barriers of lack of connection to policy/organizational fit, lack of rewards/incentives, lack of training opportunities, lack of resources and personnel support, and the complexity of the participants' role with administrative responsibilities.

The third theme under the roadblock umbrella is the technical roadblock and is labeled with the description of the course management system, issues with hardware and software, and issues dealing with learning new technology tools. The fourth theme is the instructional barrier and is labeled with the descriptions of classroom management, course management skills, and course instructional design issues. The fifth theme under the roadblock umbrella deals with time and is labeled with the description of not having enough time to develop online courses.

Theme One: Psychological Roadblock

Assumptive Thinking

Participants in this study, who developed online courses at this particular school of public health, experienced multiple roadblocks in their pursuits to develop and teach online courses. The study indicated the first of these themes dealt with the psychological

or mental aspect of how participants thought about online learning and its quality. Negative suppositions and opinions based on previous assumptive thinking concerning the quality of online learning oftentimes plagued participants in their pursuits to develop and teach online courses. This can best be illustrated by Dr. HPBS05. She stated:

I often looked down at online learning as a form of instruction and thought this form of learning was much like the kind of course you would send away for, and that students would read a great deal of materials and then take a test. I felt like online learning at this particular school of public health was going to be something similar. Much of my thinking was shaped by my tenure at a large research intensive institution in the mid-west as a tenured research faculty member. At this large research intensive institution, the emphasis was on research and funding to support that research. Faculty salaries had to be covered by research monies. Therefore, faculty at this large Midwestern research intensive institution were intensely engaged in research more so than in teaching. Once, I was able to get into a groove of teaching and had a full load of research, the idea of online learning or even online courses were a mere “after thought.” I often heard faculty at this particular institution laugh at the idea of online and those who taught online courses at that campus were looked down upon. Hearing so much negativity about online I assumed that was the reality of online learning.

The study indicated that participants’ thinking as such became a roadblock, due to the fact that they could not move past their negative assumptions of online teaching

and learning. This can be best illustrated by Dr. HPBS05. She said “I thought the students would just read stuff. You know I had no idea I just thought... I knew that a faculty course went well so I thought I would give it a try.”

As participants navigated through the activities of developing and teaching online courses, they found themselves in a state of cognitive dissonance, struggling to accept and change their thinking about online learning. This, along with their lack of experience in online learning, the activities of developing and teaching online courses led them to a state of apprehension. This can be illustrated by Dr. EOHS04 who was very skeptical of whether an online course could provide a comparable experience to its face-to-face counterpart for students. He said:

Again my beliefs were not good. I was wrong, although my delivery of the course material has been changed greatly in the last five years, I still have fear that I will not be able to do a good job developing or teaching online.

Fear and Apprehension of Change

Participants in this study experience fear and apprehension to change their thinking towards developing and teaching online courses and its associated quality. These negative suppositions and opinions based on previous assumptive thinking concerning the quality of online teaching and learning oftentimes plagued the participants in their pursuits to develop and teach online courses. Consequently, this roadblock led to an unwillingness to change previous modes of thinking concerning online teaching and learning or their traditional face-to-face teaching style. This can be illustrated by Dr. EOHS04. He said:

Well, I was skeptical of what or as to whether online courses could provide a comparable or even sufficient experience for students and when I.... With that in mind, when I developed my own online course I relied on and continue to rely on lectures that were recorded in the classroom. I felt that what I had to say was so important that students get to hear it and could not be sent to a reading in other learning activities and be expected to know what I thought was important about the topic and understand it in sufficient depth. So that was one apprehension I had. Again my beliefs were that it probably wasn't as good. How did that change. Well, I was wrong although my delivery of the course material has been changed greatly in the last five years. I learned that students can answer the material and never meet. I've learned that students miss to some extent the interaction with other students. This is part of the assignments to engage with other students. They are very happy about that and they miss the same things as the instructor does human interactions. I learned that and this is my own. I've learned that to do this well you can't just be a content expert but you have to have a real understanding of what it is like being an online student and to relate to that challenge. You probably are not going to create a good online course if you depend on staff to take all the possibilities for packaging content.

Fear of the Unknown

When experiencing fear or apprehension, participants described their lack of experience to develop and teach online courses as a source that stimulated their fear. They described developing an online course as a “painful, time-consuming process” that

made the process of developing and teaching online “daunting” due to the amount of work that lie ahead. Dr. EPI01 said:

I knew it was going to be an enormous amount of work; I felt inadequately prepared; I had never even used Blackboard, so my expectations were a combination of excitement, dread, and fear. I thought to myself how am I going to get this done. It can be a bit scary learning new things.

Similarly, Dr. HPBS005 described her lack of experience and preparation in developing and teaching online courses that contributed to her apprehension towards developing and teaching online courses:

I was really very fortunate not to have to start from scratch. Because of course I really knew nothing. I never even logged onto Blackboard prior to – I guess fall of 07, I never even logged on – my secretary would do it in Minnesota. It was really a whole different way of approaching things. So she or my graduate student would post things online. They would do all of that. So I pretty much didn't know anything.

Further, describing fear brought on by the lack of experience, being prepared, or the assurance from school leadership and support personnel, Dr. BIO01 said:

My lack of training and support for reassurance left me to spend much of my time developing and teaching these online courses without any guidance or support. This made him feel like I was not developing the online course correctly. I felt that administration left me to be alone in this endeavor.

Similarly to the theme of psychological barriers that reinforced the fear of uncertainty Dr. BIOD01's said "Administration does not support online course development efforts, therefore I for one became apprehensive, once I figured there was little to no support offered. I did it all by myself, not knowing the outcome."

Dr. EPI01 described a similar experience relating to the lack of reassurance for course development, saying "I oftentimes find myself second guessing if I am doing something right or wrong. I don't know how the course will come out." Likewise, when experiencing unknown outcomes of developing and teaching online courses Dr. EOHS04 perceived a similar experience, saying, "the feeling of being unsure as to how the online course would turn out or if the quality of the course content would diminish lead to being apprehensive of developing online courses."

When experiencing fear the process and activities of developing and teaching online courses Dr. EOHS04 said "I still have fear that I will not be able to do a good job developing or teaching online because I was not formally trained." Dr. EOHS04 also said "I had some concerns about making it [the online course] work in the sense that students could understand what I was trying to teach them to an online interface. This was a fear of mine." Conversely, Dr. EOHS03 said "lurking in the back of my mind is the fear I would fall behind and that I wouldn't be able to catch up."

Conversely, Dr. EPI01 experienced a transformation of thought and intellectual capacity relating to developing and teaching online courses as:

It [developing and teaching online courses] was actually a painful, time-consuming process, but it was also gratifying, creative, and rewarding after the

initial work was done. I believed it was possible, but I was unsure how it would turn out, or if the quality of the course would diminish.

Holding on to previous forms of thinking and their traditional teaching styles presented barriers when trying to use these methods to teach in an online environment. However, the process and activities of developing and teaching online courses would provide participants in this study with the opportunity for psychological, mental, and intellectual transformation, in addition to, growth and reflection concerning their thoughts of online teaching and learning, the online environment, its quality, and about developing and teaching online courses. This can be illustrated by Dr. HPBS05 who experienced a transformation in her assumptive thinking from having a negative, low expectation of developing and teaching online courses to a more positive outlook. She said:

I think I thought that it was I didn't know – I sort of looked down on it, that it was I don't know like the kind of course you would send away for that you would read a whole bunch of materials and take tests, that's kind of what I thought it was going to be. I didn't realize that it would be multifaceted and interactive. You know I had no idea, I just thought I knew that a faculty course went well so I thought I would give it a try and then I actually I sort of had low expectations. I thought the students would just read stuff. So I would say I have really low expectations and then I was pleasantly surprised. So far developing and teaching online has been overwhelmingly positive. You know I didn't go in thinking it would be positive. In both years I've taught it, I get good evaluations

and students have said that they have never had as much of personal attention in the class. I think that is kind of cool. Faculty will have to let go of the idea that you have to see the student in order to know that they are learning.

Fear of Safety and Loss of Social Interactions

When experiencing fear of safety and the loss of contact with students, participants described this roadblock as a source that stimulated their fear toward developing and teaching online courses. This can be illustrated by the following narrative. Dr. EOHS03 described fear in the process of developing and teaching online courses relating to safety brought on by the lack of interpersonal intimacy and relationships with students. He said:

All that was interesting [developing and teaching online courses] but it taught me to blame the personality of the person not necessarily seeing their face, however I then came back to Houston and within the first few weeks the students would stop by and of course I didn't recognize them, but they recognized me and that always worried me. You know, I have an office that has one door and there's nowhere to escape. They could corner you and you didn't know if they were going to kill you or not.

Dr. HPBS05 illustrated her main concerns of her fear with developing and teaching online courses dealt with the interpersonal social connection that formed while teaching.

She said:

I was so used to being in front of a class and connecting with students – you know and being able to be formal or get to know them. I became afraid that I

would not have that connection with students, but found through the discussion board, I did not have to see them in order to establish or sustain a connection with them. The discussion board provided that social connection.

Additionally, Dr. HPBS05 said that she would have to spend a great deal of time in the discussion boards to build rapport and to make sure students were participating in the discussions. Describing this experience, she said:

I found out that I would spend a lot of time the first six weeks of the course and a lot of time in the discussion board and made sure I would respond to all of the posts people would put on and really spend time – I ended up spending 2 to 3 hours a day doing that so that I was instructing. I also felt that I could connect with the students.

Dr. EOHS04 illustrates his experiences with social relationships and human connections. As a veteran faculty, he enjoyed social interactions between student and faculty. He was able to learn from students, understand how their personalities impacted face-to-face course instruction, and even was able to look at the students faces to change the course of his instruction as needed. However, as he transitioned to the online teaching environment, his ability to develop and sustain a student to faculty and student to student relationship with human to human personal interaction was now nonexistent. This troubled Dr. EOHS04 and left him with a feeling that he “missed” the personal contact with students. According to Dr. EOHS04, this interaction was important. He described:

I learned that students can answer the material and never have to meet them or they you. I've learned that students miss to some extent the interaction with other students and are part of the assignments is to engage with other students. They are very happy about that. They miss the same things as the instructor does human interactions.

Theme Two: Organizational Roadblock

Lack of Connection to Policy or Organizational Fit

The second theme that emerged from the narrative data in relation to roadblocks with developing online courses dealt with the organizational aspect. This included issues of organizational fit and policy incongruence with the mission, vision, or goal of the school's outreach program to the participants' activities of developing and teaching online courses. This can be illustrated by Dr. BIO01, particularly relating to personnel changes and organizational disconnect to policy and rewards. He said:

Early on, there were "disconnects" from the promise, rewards, and the actuality. This is normal for this system I guess. In order to move this school of public health forward and become competitive with other schools of public health in the United States, the school's leadership needed to recognize the opportunities that exist within the educational markets and expand its access to a global market place and economy. The best way to move the school of public health forward is to implement online learning.

Additionally, participants perceived a lack of organizational commitment from administration. This roadblock is illustrated from the following narrative from Dr.

EOHS04:

Faculty and administration must decide if the school should invest in online teaching. We did not anticipate the resources needed to support course development and implementation. It seems obvious that faculty need training and assistance in moving out of the classroom and online, so it goes without saying that the school must have an Office of Instructional Development.

However, I don't know what level of support is appropriate. I would suggest that faculty considering teaching online should be screened just as we should screen students for online learning. Some will fit the existing resource scheme, and others will not. This is especially true if the school cannot support the faculty member who wants to turn the job of creating the course to OID staff. The OID must have some authority to regulate the array of resources made available to the eager faculty. For example, they cannot provide access and training for every software product that catches the attention of faculty. The OID staff must be proactive; they must evaluate new products, identify a suite of products that meet the needs of most teaching styles and provide training in the proper use of the software. School administration needs to be committed to effective online support and to the faculty who develop and teach online.

Lack of Reward or Incentives

Part of the roadblocks experienced with developing and teaching online courses dealt with the area of organizational support, specifically the area of incentives or rewards for developing and teaching online courses. The absence of a system of rewards became a roadblock to participants. Although participants saw developing and teaching online courses as an extra duty or ancillary to their faculty appointment, there was no tangible reward to pursue such activity. Developing and teaching online courses took a great deal of time, energy, and resources, only for faculty not to receive any reward for such hard work. This left participant in a state to become apprehensive to invest in developing and teaching online courses. Dr. BIO01 revealed that there were no rewards for teaching online. He said:

It didn't count toward tenure nor do you receive any monetary remuneration.

There are few rewards for teaching online, for example, asking to go above caps because of demand, and volunteering to do so, and then seeing that the course exceeds the class enrollment to get any credit on your performance evaluations.

Lack of Training

An additional component of the organizational roadblock theme that emerged from the participants' narratives relating to their experiences developing and teaching online courses was the issue of faculty development and training and the lack thereof. For Dr. EPI01, being prepared to develop and teach online was essential and therefore felt that faculty must be adequately prepared before starting the process of developing

and teaching online courses. Describing her preparation to develop and teach online she shared the following:

I was not very prepared. I read some materials, conferred with an instructional designer several times from the main campus, which was in another city. I reviewed some existing online classes and didn't really know what to look for, and conferred with some faculty who had experience with online teaching. I had to have a crash course in learning new technology—Blackboard, Camtasia, and online teaching and learning issues within a short window of time. I think a month. Although we have a number of faculty teaching online from regional campuses, my own experience was that it was more difficult not being able to confer in person at the main headquarters campus.

Such an experience made it difficult for Dr. EPI01 to develop the online course. She stated that the only help she received was in the form of informal sessions “on the fly” as she calls them from an instructional design support person at the main headquarters campus, who came to her campus and gave her course design support. She described the training experience as the following:

I would say that my training opportunities were more informal consultations with an instructional designer and other faculty. The only formal training was a Blackboard session held by the instructional designer, which was very helpful. I was able to get some help notes and reassurance that I was on the right track and when I was off, I got some recommendations that would put me on the right track. I had to rely on my experience in teaching students for many years, which

mainly led me in the right directions, even with minimal training. More support for regional campuses would be helpful. Some of the workshops provided some great ideas, but it would be nice to have a few translated for us, with specific examples—the opportunities and technology get overwhelming.

Similarly, Dr. EOHS04 had a similar experience and narrative. He said “I hate to sound very arrogant but I don’t feel like I had a great deal of help. Training was not that plentiful.”

Additionally, Dr. EOHS04 said that faculty need training and assistance transitioning from a face-to-face teaching environment to an online environment. To illustrate this point, Dr. EOHS04 said:

It is obvious that faculty need training and assistance in moving out of the classroom and online, so it goes without saying that the school must have an Office of Instructional Development or structure that provided online teaching and learning and instructional innovation support.

Describing fear brought on by the lack of experience, being prepared, or the assurance from school leadership and support personnel, Dr. BIO01 said:

My lack of training and support for reassurance left me to spend much of my time developing and teaching these online courses without any guidance or support. This made me feel like I was not developing the online course correctly.

I felt that administration left me to be alone in this endeavor.

Illustrating the point of the importance of training, Dr. EOHS04 said:

If we are to be successful at developing and teaching online courses, faculty should be presented with opportunities for high quality, intermitted faculty development and training that is aligned with the organizational policies and is readily available and assessable.

Lack of Resources, Personnel, and Support

In addition, the lack of a reward or incentive program, coupled with the lack of training or preparation activities, and the lack of resources including materials and personnel support became roadblocks to participants as they worked to develop and teach online courses. Without a formalized training program for developing and teaching online courses, participants did not have grounding to engage in such activity (i.e. developing and teaching online courses). Further, without resources in the form of materials, hardware, software, equipment, or in terms of personnel support, participants could not develop their online courses or implement them for online distribution. This presented a major challenge and obstacle to the activity and process of developing online courses.

This can be illustrated by a narrative from Dr. EOHS04 detailing lack of support from administration:

I can look back on my duties developing and teaching online activities and wish I could make things better and different and pay more attention to them. None of the prior administration at this school provided resources or support to the academic teaching part of the school at all. We have a token office. There was some attention given to upgrading the visibility of that position and increasing

those responsibilities and so forth. But no budget came with it. Very little assistance came with it. Expectations from administration weren't clear. I never had any authority nor was the director of the office given any either.

Dr. EPI01 described a similar experience relating to support for the regional campuses.

She said:

More support for regional campuses would be helpful. It's difficult not having access to the main campus resources and personnel. Some of the workshops provided some great ideas, but it would be nice to have a few translated for us, with specific examples.

Dr. EOHS03 shared a similar experience that spook to support:

Administration should make sure that as they are calling for more online courses that they go beyond advocating for those types of courses because they result in increased student enrollment and increased tuition based formula funding. That they go beyond that and understand what opportunity that offers as long as it's done well. I'm saying that if administration is going to encourage us as faculty to do more online courses then they need to have enough understanding of what online teaching is and allow the faculty to develop these courses the right way. And that means ample time up front getting faculty at the time to be grounded in the theory of online teaching and give them enough time to develop the courses. So otherwise you were going to get what you get which is I'm going to post my PowerPoint and posting an exam and that's not online teaching.

Dr. BIO01 felt that “often my voice of concern was left on deaf ears.” He explained:

There was not time allowed to pilot test the material. When I asked for one semester first to do this, develop-pilot-test revise-then implement, it was rejected out of hand. When I pointed out this was not consistent with either good curriculum development or even good methodology, this was met by an expletive, and told to move on with it.

Participants who developed and taught online courses stated that school administration should provide instructional design personnel. This factor influenced the participants’ ability to develop and teach online courses and thus their experience. This roadblock can be illustrated in the following narrative from Dr. HPBS05 who said:

I relied heavily on another faculty before and since then. I’d rather talk to somebody when I have a problem – have someone come – like when there is a new application in Blackboard – a seminar on that or have someone send me something and say check this new application out. Or you can do such and such. That would be more interesting to me. Printed resources aren’t usually that helpful.

Dr. EOHS03 shared a similar experience that spoke to staff personnel as a resource and their associated roadblocks. He said:

I didn’t actively solicit any help other than the instructional design staff at the school. The one-on-one instructional training provided from the instructional design staff was very helpful. I do consider the school given the access to

resources – the instructional design staff was a resource. But obviously if the instructional design team hadn't been at the school, I would not have had access.

A narrative from Dr. EOHS04 illustrating the importance of staff personnel as a resource:

I basically talked to people. We didn't even have online course examples, being one of the first to develop online courses, I could go look at someone else's blackboard page. I needed help and my secretary helped me do this, which was to go out on the Internet and find online courses that were out there and I certainly wasn't embarrassed to borrow other people's ideas, or to see how they did things I was unsure how to do. And of course I had the instructional design staff to help me. That was a tremendous help.

Dr. HPBS05 shared a similar experience that spoke to staff personnel in the form of a TA or teaching assistant as a resource:

If I had to start from scratch then it would have been a huge challenge. Starting with a model is so much better. So if people could be given extra money or hire someone to develop – because it's so much work to do, then I think people could go from there. I think that it is what the faculty who I used did. She had a really gifted TA to develop the class. I think that is really helpful. Also, make sure there is a TA for these classes. Because the TA can troubleshoot, do the grading, and other things. So to do it without a TA is kind of tough. So a TA in this case is important – just to keep feedback going on participation.

Faculty Roles and Responsibilities

In addition, to organizational roadblocks, the issue of having dual roles, both an administrative role such as associate dean, regional dean, or division director and the role of faculty presented another challenge for participants who developed online courses emerged as a separate theme within the overall narrative data relating to roadblocks. This theme manifested itself when administrative responsibilities interfered with participant's teaching responsibilities to develop and teach online courses. Those who held both roles found that they had little time to develop their online course due to a conflict of administrative responsibilities within their leadership position. This caused frustration when participants, who were organizational administrators, tried to pursue the activities of developing online courses, but were entrenched in administrative responsibilities and found little time to develop their online courses. This roadblock can be illustrated by Dr. HPBS05. Describing this experience, she said:

I like the idea of being online. I wanted to get to know what students were like across Texas. The course was set up by another professor. The other thing is that I liked being regional dean. I felt like having a class that had more flexibility was good because I could teach the online class all day long and in little bits so I could teach at night and at work, because here if someone calls for a meeting the dean or the Vice Chancellor for Health Initiatives or I have to be at the meeting, that really needs to take priority, and I need to be there. So I felt like this kind of fit my role as regional dean and then I taught it the first time and thought it was

really fun. However, I had to create time late at night and on the weekends to work on the course.

Additionally, faculty roles were perceived to be different once faculty developed and taught online learning. This shift caused discomfort and impatience as the shift was made. This roadblock can be illustrated by the following narrative. Dr. EOHS03 describes this new shift in order to be successful developing and teaching online courses. He said “Faculty must successfully transition (and accept) from the traditional “sage on the stage” format, teacher-centered, to more of a facilitator role (student centered).” In describing this roadblock, Dr. EOHS03 said:

With developing and teaching online, faculty in public health will have to evolve into a new role. No longer can faculty use traditional means of teaching. With online, you have to design the course, then develop the course, then revise and manage the course, then you have to learn technology and a course management system, and then master the discussion board and use it well. This will require more time, more energy, and more patience.”

Dr. BIO01 described a similar experience with an associate roadblock and felt that the faculty needed to change with the times and with the new age of teaching brought on by the digital age. He said:

Faculty in public health can no longer see themselves as the expert giving information to students, but more a guide, showing students where the information is, how to understand it, and ultimately collaborating with the student on how to use it.

Dr. EOHS03 emphasized understanding the complexities of the new role as faculty developing and teaching online courses and that faculty could not accomplish the task of developing and teaching online courses on their own without realizing their new role. He felt that now faculty would have to “design” learning environments, instead of “having” instructional environments. Illustrating this point he said:

Once I understood that this was going to take a lot of pragmatic shifts both in my role as a teacher as well as the students as learners, I realized it was a lot of work. The one thing that helped the most was working with the instructional design team on fixed schedules.

Theme Three: Technology Roadblock

Course Management System

A third theme that emerged from the roadblock discussion that influenced the participants’ ability to develop online courses at this particular school of public health dealt with issues of technology. Participants not only had to learn the functionalities of multiple software and hardware programs, participants also had to learn how to use the tools in the context of developing online courses. Additionally, participants had to learn how to use the course management system, which was often plagued with technical problems. The fact that the course management system was not user friendly, hard to use, had major technical problems such as being down for troubleshooting, and a lack of operational functions, led participants to become frustrated with the course management system. This presented roadblocks for participants who wanted to upload content and other course files to the course management system. Since the course management

system had system integrity issues, the course management system was not reliable for uploading content and media files.

In addition, participants who developed online courses had to deal with the issue of hardware and software failures as well. This presented additional challenges to participants when trying to develop and package course content to upload to the course management system. For when participants were engaged in the course management system, computer problems would erupt and technical support would have to come out and fix the problems. This took away time that could be used to develop their online courses. This roadblock is illustrated as Dr. BIO01 transitioned from the course design phase to the course development phase. He was often frustrated with his interactions with technology and held that technology was a necessary evil that faculty must learn in order to develop and teach online courses. He said “first they [faculty] must learn the course management system and other technology tools such as website software, video software, and media software.” Dr. BIO01 said the course management system was not “user friendly, it was dull, clunky, and had no pizzazz.” This roadblock is illustrated by the following narrative:

Blackboard is clunky, look at the spell checker for example; it’s not friendly at all. The course management system sometimes makes it difficult to develop the course due to limitations and constraints of the system. You can only add certain files with a certain file limits of a certain size. This often makes one frustrated and annoyed, because in order to teach biostatistics well online, you have to show a number of videos on solving equations or how to solve equations

as well as the application of statistical models in two or three dimensional visual displays. The course management systems won't allow you to upload large media files making one even more annoyed. Now you have to find alternatives and then learn how to edit video files and export them into additional file formations to reduce the file size.

Learning New Technology Tools

Learning new technology tools including hardware and software proved to be a roadblock in the context of this study. In order to develop and teach online courses, one must learn not only the course management system, various hardware and software tools, but also peripherals. This discussion emerged as a theme from the narrative data related to barriers and challenges. This experience is illustrated from Dr. EPI01. With the lack of training opportunities and support for learning technology offered by the school made Dr. EPI01 spend much of her time learning technology tools and techniques on her own without any guidance or support. This made her feel like she was not “developing” the online course correctly and that she was alone. Dr. EPI01 stated:

My main concerns when developing and teaching online were the time investments, my lack of experience with technology mainly Blackboard and Camtasia, and finding time to attend training. Technology just isn't my forte. It can be a bit scary learning a number of new things. Being regional deans doesn't make it easier either, it in fact makes it hard to find time to adequately plan for and design an online course. She describes such an experience as “painful and stressful.”

Learning the technology tools including hardware and software to develop online courses was a challenge and in some cases a barrier. Dr. EPI01 described this phase as “time consuming, exhausting, and difficult if you don’t have good technology skills.” Dr. BIO01 illustrates a similar narrative.

Although, the course management system is one piece of technology you have to learn, you have to learn other tools including video capture, video editing, presentation software, and web and multimedia software. Learning the software is a challenge.

Another similar narrative from Dr. EOHS03:

With developing and teaching online courses, faculty in public health will have to evolve into a new role. No longer can faculty use traditional means of teaching. With online, you have to design the course, then develop the course, then revise and manage the course, then you have to learn technology and a course management system, then master the discussion board and use it well. This will require more time, more energy, and more patience.

Theme Four: Instructional Barrier

Instructional Design

A fourth theme in the discussion of roadblocks that influenced the participants’ ability to develop online courses dealt with the area of instructional design. Participants had the challenge of designing their online course instruction in a systematic fashion that met student learning needs. As a result, participants faced the uncertainty as to how the course would be implemented. This roadblock can be illustrated from Dr. BIO01:

Developing online courses is a “devourer of time”. It takes considerable time to design the course including orienting and developing a “story board” or design map for the course, identifying and classifying what was available online to use, in addition to designing the learning that was to take place by using concept based instructional activities and defining, and in some cases redefining objectives. You have to fundamentally reconstruct your course syllabus based on the new design map or storyboard for the course. This reconstruction forces you to abandon your old way of thinking about teaching while embracing what the online environment has to offer. This is a great deal of work,

Dr. BIO01 further illustrates:

Although developing an online course is tough, rather I should say the design component is tough, I enjoyed the process because I learned more about how to teach biostatistics better and the various methods I could use. This wouldn't have happened had I not made an online course and am assured that it met the full needs of the syllabus, and was indeed a credible graduate course as mandated in the catalogue.

Student Technical Knowledge and Skill

Student technology skills and abilities were a concern of the participants in this study. Poor technology skills or the lack thereof, presented a unique roadblock to participants as they developed their online courses. This roadblock can be illustrated by Dr. EOHS03:

My concern was that we would launch the course on the first day and all the glitches would start. Students would start falling behind and he as a faculty would fall behind, due to trying to troubleshoot the problem. This would cause students to start complaining. You have to remember our graduate students tend to be older than the typical undergraduate college student. Some of them are quite a bit older and so technology creates a fear in them and all they need is an excuse to say – this doesn't work – and if a glitch happened fortunately there were very few glitches, but because I think there was enough time for testing before hand to make sure it worked day one.”

Theme Five: Time Roadblock

The Devourer of Time

Lastly, a major challenge to overcome was the issue of time. This was an emergent theme that resonated through the roadblock narrative data. Participants described this roadblock as a race against time. Time was not on the participants' side. With the complexities of being prepared to develop online courses, as well as learning multiple tools to be successful in the process, instructional design methods for course planning, course design, and the interference of administrative roles, participants saw developing online courses as “a devourer of time.” There was not enough time to develop online courses.

In reflecting on the experience of developing online courses and its associated roadblocks, Dr. EOHS04 illustrates:

In order to be successful at developing online courses, faculty must take the time to do the work themselves, in addition to understanding the complexity of what an online student learning experience entails. My own personal thought – I’ve learned that to do this well you can’t just be a content expert, but you have to have a real understanding of what it is like being an online student and to relate to that challenge. You probably are not going to create a good online course if you depend on staff to take all the responsibilities for packaging content. I think I’m not saying you can’t create a good course. I’m sure faculty could create a decent course, however, I think that faculty who take the time to not just read the book, but learn how to use the software, understand the technologies involved, and are willing to explore new ideas for online learning activities, would be in a better situation because they are not just going to be handling content and looking at the results in terms of grade and student evaluations.

Dr. EPI01’s experience developing an online course at this particular school of public health can be described as being “a painful, time-consuming process” that made the process and activities of developing and teaching online “daunting.” Dr. EPI01 further illustrates time as a roadblock:

My main concerns when developing and teaching online were the time investments, my lack of experience with technology mainly Blackboard and Camtasia, and finding time to attend training. Technology just isn’t my forte. It can be a bit scary learning a number of new things. Being regional deans doesn’t make it easier either, it in fact makes it hard to find time to adequately plan for

and design an online course. I had to have a crash course in learning new technology—Blackboard, Camtasia, and online teaching and learning issues within a short window of time. I think a month. This was “painful and stressful.”

Dr. EPI01 concluded that developing and teaching online courses “was an unmet demand for more time” and that greater support for faculty is warranted, including having a TA and that teaching online requires a large commitment of time.

Dr. BIO01 describes developing and teaching online courses as a “devourer of time”, while Dr. EOHS03 illustrates that “developing online courses would involve time for testing, revision, and more testing to see if everything worked according to the course design specifications.” Describing a similar experience with time as a roadblock, Dr. HPBS05 illustrates:

I found out that I would spend a lot of time the first six weeks of the course and a lot of time in the discussion board and made sure I would respond to all of the posts people would put on and really spend time – I ended up spending 2 to 3 hours a day. You know this takes a lot of time, even if it was a half an hour here and there.

Dr. EOHS illustrates that “the biggest challenge has always been finding sufficient time to develop the course.”

Themes Associated with Roadblocks for Teaching Online Courses

When teaching online courses, themes and descriptions of roadblocks that emerged from the narrative data were organized according to themes and descriptions

and are summarized in Table 7. The researcher labeled two themes and five roadblock descriptions associated with teaching online courses at this particular school of public health. The first theme is the technical category and is labeled with the roadblock descriptions of the course management system and issues of hardware and software. The second theme fell within the instructional category and is labeled with the roadblock description of classroom management, course management skills, and instructional design.

Table 7: Themes and Descriptions of Roadblocks for Teaching Online Courses

| Roadblock Theme | Roadblock Description |
|-----------------|--|
| Technical | Issues with the course management system Issues with hardware and software |
| Instructional | Course management/classroom management and instructional design Student technical skill level |

Theme One: Technical Roadblock

Course Management System

According to the study, a roadblock that influenced the participants' experience in teaching online courses at this particular school of public health dealt with issues of technology. The course management system was plagued with technical issues. The

fact that the course management system had poor functionality, was down, and could not interface well with other software program, led participants to become frustrated with the course management system. This presented a roadblock for participants who wanted to upload content, participate in discussion boards, or even chat with students online.

This can best be illustrated by the narrative of Dr. BIO01. Dr. BIO01 said:

The course management system was not user friendly, it was dull, clunky, and had no pizzazz. Blackboard is clunky, look at the spell checker for example; it's not friendly at all. The course management system sometimes makes it difficult to develop the course due to limitations and constraints of the system. You can only add certain files with a certain file limits of a certain size. This often makes one frustrated and annoyed, because in order to teach biostatistics well online, you have to show a number of videos on solving equations or how to solve equations as well as the application of statistical models in two or three dimensional visual displays. The course management systems won't allow you to upload large media files making one even more annoyed.

Patches to the system had to be installed on local hard drives as well as a system wide roll out for more severe technical issues. Since the course management system had several technical malfunctions, it was occasionally taken down for maintenance and thus users could not log on. This made the system unreliable for teaching. Additionally, participants who taught online courses had to deal with the issue of hardware and software failures. Sometimes the printer and other peripherals would not work and thus IT had to be called out to troubleshoot problems. This took away valuable time one

could use to facilitate learning in an online course. This roadblock can best be illustrated with the following narrative from Dr. EOHS03:

Probably the only important glitch came at the time I offered the first online exam, using Blackboard. There were no problems setting up the exam, entering the questions or pre-testing it. The problem came when I decided to try and use SecureExam, a new license/program that the School had just purchased, but that had not been tested by any of the faculty. SecureExam is supposed to give password-only access to the exam, and prevent students from accessing other Internet sites (e.g., Google) during the exam period. It backfired, despite following the preparatory instructions – students would follow them and were blocked from accessing the exam.

A similar experience described by Dr. HPBS05:

I think the only barriers I had was that sometimes blackboard would go down or I didn't know how to view if students were taking the exam or not – those technical issues details, but after I asked the TA I found out about those things.

Theme Two: Instructional Roadblock

Course Management and Instructional Design

Another roadblock theme that emerged from the online learning barrier narrative data that influenced participants' ability to teach online courses dealt with the area of instruction, including course and classroom management and implementing an instructional system where student could navigate to access course materials.

Participants had problems designing their online course to meet the usability needs of the

students. As a result, there was a high degree of chaos in some courses. This presented a challenge with not how to provide information to the students, but how to present a navigation structure that was helpful and useable in finding information or course documents. This presented a challenge, due to the fact that participants had to learn very quickly that it was important to tell students more than once and in multiple ways where they needed to post particular assignments, where the requirements for the assignments were located, and where to find course expectations and grading criteria. The challenge was to make everything very clear. Participants had to spell everything out in layman terms in order to reduce student confusion and the onslaught of emails with repetitive questions. This challenge was not about getting the content in a user-friendly form, but getting students to understand how to navigate through the course. This roadblock can be illustrated by the following narrative from Dr. EOHS04.

I think the biggest challenge has always been finding sufficient time to develop the course at the same time to teach it. The first few times though there was a high degree of chaos in the course because of the problems I had anticipated, problems with not how provide information and how to present what our students would navigate the course. So I learned very quickly that it's important to tell them more than once and in multiple ways I'm not talking about understanding global warming, I'm talking about where you post for this particular assignment, where are the requirements for this assignment, and where are your expectations. You also have to make it very clear what the expectations are. You have to spell

it out. Big challenge is not getting the content in a user-friendly form but it's getting students to understand how to get through the course.

Student Technical Knowledge and Skills

Teaching online courses was found to be a challenge, due to the students' level of technology skill, knowledge, and abilities. This challenge presented itself as a roadblock in the participants' experience teaching online. Dr. BIO01 revealed that technology affected the students' readiness or familiarity with online learning and his ability as a faculty to engage in online teaching. He said:

As with any technology this also affected the students' readiness or familiarity with online teaching. Some look forward to it, others were totally unfamiliar with it, some "had no choice", and others saw it [online courses] as solving a big problem for them that is logistically able to fit the online course into their otherwise busy life.

Issues with technology, not only learning tools to develop the online courses, but to teach the online course was perceived as a problem that affected Dr. BIO01 experience developing and teaching online courses, but also affected the students. This roadblock can be illustrated by Dr. BIO01:

You have to know technology in order to teach online. If students come to you with a technical issue affecting them and their ability to complete the assignments online and you don't know what to do, you are in a pickle. Again maybe not unexpectedly, many students, just "show up" including asking where is Blackboard? How do I get on to it? These should not be the questions that the

instructor has to deal with when in fact; the students have challenges to get into the material of the course. Some students lack basic skills like understanding what a file extension is and what is its function. For example, trying to open a .ppt presentation with Word and wondering. They become frustrated that they can't view the presentation.

According to Dr. BIO01, this can become frustrating, having to serve as a technical support person to the student, when they should have already been prepared with such knowledge.

Composite Textural-Structural Description: Reward Themes

Themes and descriptions associated with rewards for developing and teaching online courses are organized according to activity type, labeled, and are summarized in Table 8. These are discussed in terms of either intrinsic or extrinsic rewards. The researcher labeled two categorical types and described seven beneficial themes and descriptions for developing online courses at this particular school of public health.

Table 8: Activity and Summary of Rewards for Online Teaching

| Activity | Rewards Themes and Descriptions |
|---------------------------|--|
| Developing Online Courses | Design innovation Accessibility New methods for instructional delivery |
| Teaching Online Courses | Convenience & Access for students Access and penetration into a global market Instructional innovation |

The first activity dealt with developing online courses and is labeled with the intrinsic reward themes of design innovation, accessibility, and new methods of instructional delivery. The second activity dealt with teaching online courses and is labeled with the benefit of convenience, access and availability for students, access and penetration to a global market, and instructional innovation.

Themes Associated with Rewards for Developing Online Courses

Design Innovation

Intrinsic rewards for developing and teaching online courses were divided into two activities. The first activity dealt with rewards for developing online courses. The narrative indicated that developing online courses presented participants with an opportunity to transform their thinking, assumptions, expectations, and attitudes towards online learning. These attributes are identified as intrinsic rewards. Many started with a negative opinion of online learning, however through the process and activities of developing their online courses, they began to see the realities of online learning and how different the reality was from their assumptions. This can be illustrated from the following narrative of Dr. EOHS03.

Once I understood that developing and teaching online courses would take a great deal of pragmatic shifts in my role as a teacher and in the students as learners, I finally was able to develop his course. This made me energized to continue the online development process. I realized that developing and teaching online courses was a great deal of work, but it was fun.

A similar experience illustrated by Dr. HPBS05.

Much of my thinking was shaped by my tenure at a large research intensive institution in the mid-west as a tenured research faculty member. At this large research intensive institution, the emphasis was on research and funding to support that research. Faculty salaries had to be covered by research monies. Therefore, faculty at this large Midwestern research intensive institution were intensely engaged in research more so than in teaching. Once, I was able to get into a groove of teaching and had a full load of research, the idea of online learning or even online courses were a mere “after thought.” I often heard faculty at this institution laugh at the idea of online and those who taught online courses at that campus were looked down upon. Hearing so much negativity about online I assumed that was the reality of online learning. However, coming to a state in the Southwest region of the United States, I saw the complete opposite and had a shift in thinking about online courses, after shadowing another professor in her online course. I didn’t realize online courses would be multifaceted and interactive. I think that is kind of cool.

A similar experience can be described by Dr. EOHS04.

Well I was skeptical of online courses and whether it could provide a comparable or sufficient experience for students and when I.... With that in mind when I developed my own online course, I relied on and continue to rely on lectures that were recorded in the classroom. I felt that what I had to say was so important that students get to hear it and could not be sent to a reading in other learning

activities and be expected to know what I thought was important about the topic and understand it in sufficient depth. So that was one apprehension I had. Again my beliefs were that it probably wasn't as good. How did that change. Well, I was wrong although my delivery of the course material has been changed greatly in the last five years. I learned that students can answer the material and never meet. I've learned that students miss to some extent the interaction with other students. This is part of the assignments to engage with other students. They are very happy about that and they miss the same things as the instructor does human interactions. I learned that and this is my own personal thought - I've learned that to do this well you can't just be a content expert but you have to have a real understanding of what it is like being an online student and to relate to that challenge. You probably are not going to create a good online course if you depend on staff to take all the responsibilities for packaging content.

Accessibility

Developing online courses allowed greater global access to public health knowledge and education, thereby meeting global market and competition demands. This is identified as an extrinsic reward and can be illustrated by the following narrative of Dr. BIO01.

There are significant enduring rewards that are and still remain the excitement in meeting new challenges while given even better technology, and supporting students learning and the Schools outreach efforts. I feel that in order to move this particular school of public health forward to become competitive with other

schools of public health in the United States, the school's leadership needed to recognize the opportunities that exist within the educational markets and expand its access to a global market place and economy. The best way to move the school of public health forward is to implement online learning. As I am in accord with the schools program for outreach education, outreach programs exists to search out new opportunities to expand educational access of public health education to meet current competition trends in the education market. Since public health is a relatively new, but rapidly maturing field of study, the complexities of the cyber world add to the challenge of promoting public health knowledge to a local and global audience. The school should take more of a stance to engage in innovative teaching methods to meet a large, yet diverse audience. I for one am glad to have the opportunity to contribute to these goals, to help make them actualities.

New Methods for Instructional Delivery

Developing online courses allowed participants to learn new approaches to teaching and learning, new approaches to student engagement and active learning strategies, as well as new approaches to designing and course planning. This is identified as an intrinsic reward and can be illustrated with the following narrative of Dr. EOHS03.

The advantages are if it's done right it opens a student in general to a much more fun way of learning. Also I think that when you consider that adults learn differently than children, developing an online course that frame issues and

topics from the standpoint of real world cases that they have to work through, that adapts better to the learning style of the adult. And adults learn better with problem solving, especially when you can relate it to the experiences that they can recognize. I don't know about problem-based learning because I haven't done much of that, but I think the online format really is more useful to adults, once they overcome their initial fears. So that's one advantage. The other is obviously being able to teach a class wherever you are as long as you have access to the Internet.

Another perspective related to the themes associated with the intrinsic rewards of developing online courses can be seen from the following narrative of Dr. BIO01.

I felt like I learned and benefited from the ever increasing technology to enhance the educational experience for the student and for effective teaching. I was gradually moving in the direction of web based learning in my in-class teaching; that is employing basic online learning skills. In the past I had developed "learning by objectives" and distance education packages many years earlier, in improvement of vital statistics systems and e program evaluation, for two examples. Thus I felt I knew what I was getting into in both the positive aspects and also within the context of challenges.

Additionally, developing online courses presented new methods for delivery instruction with technology. Developing online courses provided an intrinsic reward of innovation in course design by incorporating new technologies. This can be illustrated by the following narrative of Dr. EOHS04:

I enjoyed the new challenge of repackaging the content from an existent course for online delivery. I'm sure that my fascination with hardware and software technologies and the ability to work on this endeavor from home after normal office hours contributed to this experience. Most of the activities that we now do in the online course can be traced back to something in the hybrid course, where content is sitting out there and the majority of the face-to-face or ITV activities were part of the blackboard exercise and students could move their term papers to blackboard so on and so forth. All of the content was either in the textbook or a blackboard page.

Dr. EPI01 revealed "I had to have a crash course in learning new technology—Blackboard, Camtasia, and online teaching and learning issues. This was helpful in teaching online."

Themes Associated with Rewards for Teaching Online Courses

Convenience and Access to Students

The themes that emerged from the narrative data associated with rewards for teaching online courses, dealt with the convenience factor and are similar to the themes generated for developing online courses. These are identified as an extrinsic reward. Participants could teach anywhere, at anytime, and were no longer bound by time and space. According to the study, this was a great benefit to faculty who had administrative roles and teaching responsibilities. No longer did participants' teaching roles interfere with their administrative roles and vice versa. Additionally, teaching online allowed participants to become more available to the students. Participants used the online

course as a platform for office hours, student contact, and communication. There were more opportunities to be available to students. This can be illustrated by the following narrative of Dr. EOHS04.

So the major advantage is investing my time in more productive way. The other advantage of teaching online courses is that I can do almost everything from home. Not only do the students have the advantage and of course this is an advantage of online teaching not being tied to time and place or an experience but the instructor at the same advantage.

Dr. HPBS05 gives a similar expression related to the convenience of teaching online courses. She says “Well I think the advantage is to be able to do it anytime for students.”

Access and Penetration into Global Markets

Further, teaching online courses allowed a greater access to public health knowledge by broadening access to such knowledge and information. This was seen as an extrinsic reward. Now that courses were online, students from around the globe could take part in the public health knowledge production and knowledge acquisition process, thereby taking the knowledge back to their home countries and implementing new modes of thinking and frameworks to improve public health conditions in their respective countries. This can be illustrated from a narrative by Dr. BIO01.

The best way to move the school of public health forward is to implement online learning. As I am in accord with the schools program for outreach education, outreach programs exist to search out new opportunities to expand educational

access of public health education to meet current competition trends in the education market. Since public health is a relatively new, but rapidly maturing field of study, the complexities of the cyber world add to the challenge of promoting public health knowledge to a local and global audience. The school should take more of a stance to engage in innovative teaching methods to meet a large, yet diverse audience. I for one am glad to have the opportunity to contribute to these goals, to help make them actualities.

Instructional Innovation

In addition, teaching online courses allowed participants to become innovative in their instructional approaches in both their face-to-face and online courses. This was both an intrinsic reward and an extrinsic reward. Tools, process, strategies, and frameworks learned were used to improve the levels of instruction and engagement in their face-to-face courses. This can be illustrated from the following perspective of Dr. EOHS03.

I have to admit, doing the online course twice and face-to-face at least helped me with the content and with the learning objectives because I was essentially going to give the same content. So that actually saved me a lot of time. But what I have to do was take that content and design learning activities around them. It [developing and teaching online courses] allowed me to think through the building blocks of the course. You know in graduate school, we never had any formal training in teaching this allowed me to do that – mapped it out in a series of sequential didactic modules. That began with giving students facts and

knowledge about environmental and occupational health sciences. So I can get them all up to the standard and so as my progress we transition from feeling there is with facts and stuff to more analytical type approaches problem-solving and solving questions and giving policy questions at the end. I had a semester long longitudinal module that was a course project that tried to integrate what they were trying to learn in the four sequential modules. This was a transformation of a face-to-face course to online. The content is largely there – having said that the activities had to be changed – the way in which the content was delivered had to be changed and greatly adapted to an online format. So there were a number of changes.

Dr. EOHS03 continues.

This experience [developing and teaching online course] also allowed me to introduce the online element into my face-to-face courses I had taught. For example I teach a clinical occupational medicine course via instructional television where we teach general clinical topics and traditionally we've done the traditional listen to the lecturer, exam and etc. The online course and web-based case study in this course this past semester on top of the traditional format have helped and that was cool fun and easy to do. It also allowed me in this traditional face-to-face format to move some stuff I had been doing face-to-face and using some of the online applications; so for example I used to always get a review session for the test before I give them the test. Now I do a PowerPoint narration and then I let them ask me questions on the discussion board rather than

using an entire class edition to review. So now all of that is online and I haven't heard any complaints to the contrary. They liked it. The online experience has helped improve my face-to-face teaching

Moreover, teaching online allowed the participants to discover and implement new approaches to student engagement and active learning. This extrinsic reward can be illustrated by Dr. HPBS05.

I've added an online discussion last night I was on that and I couldn't believe how much they (the students) were talking on the online discussion and they didn't say a thing in class because this age group is used to being online.

Finally, teaching online, according to the emerging themes from the narrative data, allowed learning to become rigorous, but at the same time fun, making it enjoyable to students and faculty alike. This intrinsic reward can be illustrated from the following narrative by Dr. EOHS03.

Personally, I had a blast developing the course – more fun than in many years! It was really fun. It was really a fun activity, one I looked forward to it. There came a point where doing all my other work became an interference because what I want to do was develop a course, because I was having fun doing. I don't think my patience would appreciate it.

Dr. HPBS05 provides another illustration to the enjoyable experience. She says

I like the idea of being online. I wanted to get to know what students were like across Texas. The course was set up by another professor. The other thing is that I liked being regional dean. I felt like having a class that had more flexibility

was good because I could teach the online class all day long and in little bits so I could teach at night and at work – because cause here if someone's' calls for a meeting the dean, or the Vice Chancellor for Health Initiatives or I have to be at the meeting, that really needs to take priority and I need to be there. So I felt like this kind of fit my role as regional dean and then I taught it the first time and thought it was really fun. However, I had to create time late at night and on the weekends to work on the course. Nevertheless, this was a fun experience.

A similar illustration can be gleaned from the following Dr. EPI01

In retrospect, I did enjoy the course, and believe that this course was actually improved by developing it into an online course. The format allows one to reach out to more students. You get an unexpected feeling of rapport, respect, and active participation among the students, and by the nature of the format, a greater range of topics. I actually enjoyed the experience much more than I originally thought, and thought it was better than teaching it by ITV. The hard part is over, now the fun part begins.

Summary

In Chapter V, a composite of all the textural-structural descriptions were presented and a summary of the emergent themes of those descriptions were also provided including the themes for experience, themes for roadblocks to public health participation in online learning, and themes for both intrinsic and extrinsic rewards for online learning. Next, in Chapter VI, research questions one, two and three are presented.

CHAPTER VI

FINDINGS OF THE STUDY

This qualitative study used a phenomenological research design to describe the experience of public health faculty who develop and teach online courses, at one school of public health, located in the southwestern part of the United States. The goal was not to test any specific hypothesis relating to online learning, but to provide insight into the experience of public health faculty who develop and teach online courses and to provide information about an ever-growing phenomenon in public health education. Face-to-face, semi-structured, digitally recorded individual interviews, along with written narratives, and artifact reviews were used to attain data. The data were analyzed for significant statements, invariant horizons, and recurring themes. Final steps of the analysis involved constructing a textural description that depicted what the participant's experiences were and then constructing a structural experience that depicted how participants explained their experiences. Lastly, this chapter presents the findings from the data collection process as they relate to the following research questions:

1. How do public health faculty describe their experiences of developing and teaching online courses?
2. What barriers and/or challenges were voiced by public health faculty who develop and teach online courses?
3. What benefits of developing and teaching online courses were shared by public health faculty?

Participants' Textural-Structural Research Findings

In this section, research questions one, two, and three are addressed and answers derived from the results of the data analysis are discussed. Answers to the research questions should help clarify the phenomenon and experience of school of public health faculty who develop and teach online courses.

Research Question 1: How Do Public Health Faculty Describe Their Experiences of Developing and Teaching Online Courses?

The essence of school of public health faculty who developed and taught online courses was perceived and described as a difficult, daunting, painful, and time consuming process. This left faculty feeling frustrated, exhausted, stressed, disgusted, fed up, and in some cases, discouraged. While the feelings of the experience pertained to the development of online courses, the teaching phase of the process was seen to be positive, enjoyable, joyful, refreshing, and fun. In several cases participants indicated that they were blessed to teach online. It is important to state that the experience of public health faculty in this study revealed their negative experience relating to the development portion of the online course process; however, this negative experience began to shift as they emerged from the course development phase of the process, to the online teaching phase of the process, while undergoing a serious transformation. Their experience of developing and teaching online courses caused them to challenge their assumptions about online learning, their assumptions as to their roles as faculty, and ultimately their view of teaching and learning in a traditional face-to-face class setting. This component of the online teaching phase revealed positive attributes to the overall

experience of public health faculty developing and teaching online courses. It is at the convergence of the shift between developing and teaching online courses and the transformation process that faculty began to emerge as public health faculty who develop and teach online courses; thus, in essence becoming a new portrait to the experience of public health faculty who develop and teach online courses.

The most salient essential structures that emerged from the participants' narrative data can be centered around three prevailing perspectives. These perspectives include:

- an individual perspective;
- a technological perspective; and an
- organizational perspective.

According to the data that emerged from participant's narrative data, the individual perspective can be described as the skills and knowledge needed to develop and teach online courses. The technology perspective can be described as the availability and capacity of a technology infrastructure, to compliment and support the development and teaching of online courses. Lastly, the organizational perspective can be described as a social and political system that influences faculty's ability to develop and teach online courses.

These three perspectives, which were identified from the narrative data, manifested themselves in support, resources, preparation through faculty development and training, faculty assumptions about online learning that led to fear and ultimately a transformation in thinking, instructional practices, and their roles as faculty.

Support

Instructional and Organizational Support

Perception and assumptions informed and grounded participant's experience developing and teaching online courses at this particular school of public health.

Perceptions of developing and teaching online courses fell on a continuum between positive and negative with the extremes being described by the participants. As such, three elements influenced the faculty's experience developing and teaching online courses in this study. These elements include support, availability and quality of resources, and faculty development and training.

Support or the giving of aid to accomplish one's task was influential in the experience of public health faculty developing and teaching online courses. The study indicates participants experienced support in the process and activities of developing and teaching online courses in a variety of ways, most notably in a negative fashion that presented roadblocks to the following:

1. Instructional and organizational support;
2. Availability of resources; and
3. Faculty development and training.

Participants described their experiences with support relating to developing and teaching online courses at this particular school of public health as nonexistent, minimal, token, not of real value, unsupportive, important, critical, crucial, and needed. These challenges included ill-defined policies as to who were screened and selected to develop and teach online courses, procedures on how to access support and assistance, in

addition to not having a real support office to handle instructional design coaching for online learning, or personnel. Overwhelmingly, the participants felt that support in their efforts to develop and teach online courses were crucial. However, instead of support being a facilitator to help develop and teach online courses, support or the lack became a road block to the development and teaching of online courses. Indeed, participants reported that they were more likely to develop and teach online courses if they had departmental and peer support, and access to staff personnel that could assist in the development of online courses. Having little to no support to develop and teach their online courses, participants at this particular school of public health had to work alone without the reassurance that they were designing their online courses appropriately.

The study suggests that this particular school of public health should provide faculty with support, but also reassurance and encouragement as they develop and teach online courses. This would give them motivation to continue with the process. The participants revealed that they enjoyed teaching online and learning new ways of teaching that would reach all students; however, developing online courses in the current school of public health environment, participants felt less likely to develop and teach online and would find ways not to, given the lack of rewards or support associated with developing and teaching online courses. Indeed participants noted that developing and teaching online courses was found to be stressful, daunting, and time consuming.

The activities of developing and teaching online courses became further complicated and difficult with little organization support, which led their voices of concern to fall on deaf ears. The description of this lack of support, led participants to

feel frustrated, angry, and skeptical of the process and activities, as well as the intended outcome, which was a full functioning online course. Participants indicated this experience was unacceptable and counterproductive to meeting the needs of the students.

For some, developing and teaching online courses at this particular school of public health was clearly a complex activity. However, the level of complexity was heightened when participants did not have the assistance or reassurance needed to adequately develop and teach their online courses. This added frustration to the process and activities of developing and teaching online courses.

Availability of Resources

Participants' perception of resources, including their availability and quality was another element that influenced the participants' experience of developing and teaching online courses both in terms of technological tools and in staff personnel. Analysis of the qualitative data revealed that resources included current technology tools, peripherals, instructional technology and design support personnel, funding, books, articles, and websites. Central to their experience developing and teaching online courses, participants indicated that in order to develop and teach online courses, administration should provide and ensure a means of instructional design personnel to support and help faculty develop and teach online courses.

Further, participants found websites, journal articles, and books to be important in the process of developing and teaching online courses. Printed materials gave faculty a reference and a starting point on how to develop and teach online courses, as well as, ideas they should consider. This study demonstrated that the participants valued print

and electronic reading materials related to online learning, but ultimately staff personnel in the form of an instructional designer and a teaching assistant were seen as having more value.

While participants agreed that support was important, it was resources relating to staff personnel that became a major factor that influenced the participants' experience developing and teaching online courses. Although the instructional designer was viewed as helpful in terms of working with the faculty to package course content for online courses, it was the teaching assistant that was revealed to have more value when it came to the administration and teaching of the course. Further, according to participants, the teaching assistant helped with grading, minor technical support issues, and in answering questions in the discussion board. This helped participants feel that they were being supported with a live person. This generated, if not motivation and inspiration as described by some participants, a desire to develop and teach online courses and a greater likelihood of a positive experience. However, the opposite of this is also a substantial part of the faculty's experience developing and teaching online courses.

Participants described many experiences in which the absence of materials and staff personnel led them to venture in the development process on their own. This type of setting led faculty to having negative responses toward developing and teaching online courses. After a lapse in personnel changes, many of the participants began to not seek support from the instructional design staff, but relied on other faculty, themselves, and the teaching assistant for resources and support.

Faculty Development and Training

Faculty development and training was another element that influenced participant's experience of developing and teaching online courses. It was the lack of preparation (i.e. faculty development and training) and experience that led faculty to experience fear and apprehension within the online course development process. Fear, as the participants described it was being apprehensive to new experiences brought on by their lack of experience and preparation for developing and teaching online courses. As a result, they described developing an online course as a "painful, time-consuming process" that made the activities of developing and teaching online "daunting" due to the amount of work that lay ahead.

Participants commonly depicted their experience of fear as a byproduct of their lack of experience and being ill prepared to develop and teach online course. This fear manifested itself in how participants felt in regards to support, training, technology, and safety. This is evident by the description of fear the participants experienced in the process and activities of developing and teaching online courses at this school of public health. In brief, participants experienced fear as being part of the experience navigating through the activities of developing and teaching online courses, while trying to come to grips with this new modality of teaching, learning, and ultimately the new environment. This highlighted a need for faculty development and training.

Faculty development and training for participants took place in both a formal and an informal setting, with emphasis on more informal one-on-one instructional coaching. Formal sessions were described as formal, organized workshops or training sessions,

where groups of individuals could attend, while informal training sessions were more of a one-on-one session. Further, as revealed from the study, informal training sessions included self-directed learning opportunities, where faculty learned on their own. It is evident from the participants that faculty development and training was necessary to the process of developing and teaching online courses in order to prepare them for the realities of online course develop and for online teaching.

As described from the participants' narratives, faculty development and training topics were divided into three broad categories consisting of technology tool training, instructional design training, and pedagogical and teaching practice training. The technology tools category dealt with the training and development of various software packages and hardware peripherals. The software included Blackboard course management system, Camtasia, Captivate, Flash form, and other software tools used to package course content.

Also, this category involved training faculty on not just the functionality of the software program, but how to use the technology tools to package and distribute content via Blackboard. The instructional design training centered on training faculty in methods of analyzing students' needs and learning goals, then designing and developing instructional materials, objectives, and assessments to meet the goals and objectives of the course. The third type of training focused on pedagogical and instructional techniques for online learning, mainly discussion board strategies, using different types of activities to promote active learning, and facilitation protocols for looking at individual and group work. However, the informal training sessions were seen to be of

value and preferred over the formal training and development sessions. Some participants revealed that they did not invest too much time in any formal training courses at this particular school of public health to learn about developing and teaching online courses. The majority of their experiences in learning about the online environment were from informal learning opportunities.

While some participants at this particular school of public health saw formal and informal faculty development and training was helpful, some participants had mixed emotions feelings concerning faculty development and training. Although formal workshops were helpful and had value, the participants revealed informal sessions were better and more effective. However several participants indicated that more support for the regional campus and having specific workshops tailored to the regional campuses would be even more helpful.

All participants agreed that faculty development and training was critical to the process of developing and teaching online courses, whether it is formal or informal. Receiving faculty development and training helped to minimize fear or apprehension of the online course development process. Faculty development and training allowed the participants to become acclimated to the online teaching environment. Moreover, faculty development and training provided the participants with the motivation and encouragement needed to continue within the process of developing and teaching online courses.

Transformation

The experience of the faculty who developed and taught online courses at this particular school of public health involved a transformation process as they navigated through the activities of developing and teaching online courses. According to the participants, transformation can be described as the induced or spontaneous change of one element into another. Simply stated, transformation in this study dealt with undergoing change and growth. This component contributed to the shift from a negative experience to a positive, more enjoyable experience, while in the process and activities of developing and teaching online courses. Participants experienced transformation in the process and activities of developing and teaching online courses as vital to their experiences developing and teaching online courses. The participants described their transformation in terms of enlightenment, brought on by the process and activities of developing and teaching online courses. This took place in three forms; transformation of thought and intellectual capacity, which dealt with a change from previous negative assumptive thinking of online learning and knowledge gained; transformation of instructional and pedagogical practice, which dealt with leaving old ways of traditional instructional practices and embracing new methods of online teaching; and lastly, a transformation of identity and the concept of the faculty self, which dealt with the emergence of a new role of faculty in an online environment.

Transformation of Thought and Intellectual Capacity

When participants experienced a transformation of thought and intellectual capacity, there was a shift in previous assumptive thinking of online teaching and

learning based on negative depictions and biased opinions. As participants moved through the activities of developing and teaching online courses, their thinking changed as a result of their involvement in the activities and process of developing and teaching online courses. In addition, learning about online learning increased the participants' knowledge of online learning, thereby increasing their intellectual capacity to develop and teach online courses.

In depicting transformation of thought and intellectual capacity as it related to developing and teaching online courses, transformation involved how their perceptions of online learning evolved and how that transformation influence their ability to develop and teach online courses. Many of the participants described themselves as being skeptical of online learning, having low expectations, and a negative overall assumptive view of online learning. Before undertaking the process and activities of developing and teaching online course, several held the attitude to look down on online learning and felt that online learning was inferior to traditional modes of teaching. This feeling contributed to the negative experience as the process of developing and teaching online courses began. However, the process and activities of developing and teaching online courses caused participants to challenge and re-evaluate their assumptions and knowledge of online learning and their teaching practices. This left the participants in a state of cognitive dissonance, but they soon found themselves with a new transformed mode of thinking about online teaching and learning, brought on by the process and activities of developing and teaching online courses.

Most notably, all of the participants began to experience a positive experience of developing and teaching online courses as they released and abandoned their previous assumptions of online learning and as a result, their thinking and teaching practices changed. Not only did the process and activities of developing and teaching online courses transformed the way participants thought about online learning, the process re-energized participants back into teaching. This re-energizing brought the enjoyment they once felt about teaching back into their lives and professional careers.

Transformation in Role and Teaching Practice

Ultimately, as participants were transformed mentally, intellectually, and in their instructional and pedagogical practice, there was also a shift in how the faculty saw themselves as faculty. As participants moved through the process and activities of developing and teaching online courses, their perception of their role as faculty changed. In depicting this transformation of identity and the concept of the faculty self, participants described this transformation as a shift from the “sage on the stage” to that of a “facilitator” guiding and involving the student in the knowledge acquisition and production process.

Based on the participants’ experience, they all agreed that this new shift in the faculty role was essential in order to be successful at developing and teaching online courses. According to several participants, faculty could no longer use traditional means of teaching with online learning. Faculty would have to take on the role as course instructional designer, course developer, course manager, and technical support person

in order to be successful. Participants agreed that this new role required more time, energy, knowledge and patience.

In summary, the participants' experience of support, resources, faculty development and training, the assumptions and transformation of online learning and faculty roles that intertwine with those experiences, played primary roles in constructing the essence of the experience of public health faculty who develop and teach online courses. This essence, when referring to the experience of public health faculty who develop and teach online courses, consisted mainly of the faculty's perceptions of support, resources, faculty development and training, assumptions and transformation. Therefore, it is important to note that these components have significant influence on the experience of public health faculty who develop and teach online courses.

Indeed, the essence of public health faculty developing online courses may create an experience that encourages feelings of frustration, pain, time consumption, exhaustion, stress, or discouragement; however, the essence of teaching online courses may also create a positive experience of enjoyment, joy, invigoration, and fun, or anything between the two.

Research Question 2: What Barriers and/or Challenges Were Voiced by Public Health Faculty Who Develop and Teach Online Courses?

Barriers and challenges as voiced by the participants in this current study include a psychological, organizational, technical, instructional, and time barrier. Psychological barriers refer to the barriers of assumptive thinking regarding the nature and quality of online learning, fear or apprehension of change, fear related to the unknown and

uncertainty, fear of safety and loss of social interaction. Organizational roadblocks refer to the barriers of lack of connection to policy/organizational fit, lack of rewards/incentives, lack of training opportunities, lack of resources and personnel support, and the complexity of the participants' role with administrative responsibilities. Technical barriers refer to issues relating to the course management system, issues with hardware and software, and issues dealing with learning new technology tools. Instructional barriers refer to classroom management, course management skills, and course instructional design issues. The last barrier dealt with the element of time.

Barriers to Developing Online Courses

Psychological

As voiced by participants, psychological roadblocks dealt with the cognitive or mental aspect of how participants thought about online learning. Negative suppositions and opinions based on previous assumptive thinking concerning the quality of online learning, influenced the participants in their pursuits to develop and teach online courses. As such, their thinking about online learning became a barrier, due to the fact that they could not move past their negative assumptions of online learning. As participants undertook activities of developing and teaching online courses, they found themselves in a state dissonance, struggling to change their thinking about online learning. This, along with their lack of experience in online learning, led them to a state of apprehension. This is an additional barrier experienced in the development and teaching of online courses. Further, this barrier led to apprehension about changing their thinking concerning online learning or their traditional teaching style.

As participants continued to hold on to their previous forms of thinking and their traditional teaching styles, this presented barriers when trying to use traditional learning methods to teach in an online environment. However, the activity of developing and teaching online courses would provide participants in this study with the opportunity for psychological transformation, in addition to, growth and reflection concerning their thoughts of online learning.

Organizational

A second barrier to developing online courses as voiced by the participants dealt with the organizational aspect. This aspect included issues of organizational fit and policy incongruence to the mission, vision, or goal of the school's outreach program and to the participants' activities of developing and teaching online courses. In addition, the lack of a rewards for online learning, coupled with the lack of opportunities for faculty development and training, and the lack of resources including materials and personnel support became obstacles to participants as they worked to develop and teach online courses. Without formalized faculty development and training programs for developing and teaching online courses, participants did not have grounding to engage in the activities of developing and teaching online courses.

Further, without resources such as hardware, software, equipment, or instructional design personnel support, participants could not develop their online courses or implement them for online distribution. This presented a major obstacle to the activities of developing online courses.

In addition, the issue of having dual roles, both an administrative role such as associate dean, regional dean, and division director, the role of faculty presented another obstacle for participants who developed online courses. This barrier manifested itself when the administrative responsibilities interfered with participants' teaching responsibilities to develop and teach online courses. Those who held both roles found that they had little time to develop their online course due to a conflict of administrative responsibilities within their leadership position. This caused frustration when participants, who were administrators, tried to pursue the activities of developing online courses. They found themselves entrenched in their administrative responsibilities and found little time to develop their online courses.

Finally, the absence of a system of rewards became an obstacle for participants. Although participants saw developing and teaching online courses as extra duty or ancillary to their faculty appointment, there were no tangible rewards to pursue such activity. Developing and teaching online courses took a great amount of time, energy, and resources, only for participants to not receive any reward for their hard work. This left participants apprehensive to invest in developing and teaching online courses.

Technical

A third barrier that influenced the participants' ability to develop online courses at this particular school of public health dealt with issues of technology. Not only did participants voice that they had to learn the functionalities of multiple software and hardware programs, participants also voiced that they had to learn how to use the tools in the context of developing online and teaching courses. Additionally, participants had to

learn how to use the course management system, which was often plagued with technical problems. The fact that the course management system was not user friendly, hard to use, had major technical problems, was down for troubleshooting, and lacked operational functions, led participants to become frustrated with the course management system. This presented an obstacle for participants who wanted to upload content and other course files and materials to the course management system. Since the course management system had system integrity issues, the course management system was not reliable for uploading content and media files. Additionally, participants who developed online courses had to deal with the issue of hardware and software failures as well. This presented an additional obstacle for participants when trying to develop and package course content to upload to the course management system.

Instructional

A fourth barrier that influenced the participants' ability to develop online courses, as voiced by the participants dealt with the instructional area. Participants had the challenge of designing their online course instruction in a systematic fashion that met student learning needs. As a result, participants faced the uncertainty as to how the course would be implemented. Additionally, the technical abilities of students were found to be an issue when participants developed their online course. Unaware of student's technology ability, participants couldn't anticipate technical challenges that may erupt as students took the course and therefore could not design their courses to compensate for this obstacle.

Time

Lastly, time was a major barrier to overcome. Participants described and voiced this barrier as a “race against time”. With the complexities of being prepared to develop online courses, as well as learning multiple tools to be successful in the process, instructional design methods for course planning, course design, and the interference of administrative roles, participants saw developing online courses as “a devourer of time”, leaving them with the feeling that there was not enough time to develop online courses.

Barriers to Teaching Online Courses

When teaching online courses, barriers and challenges as voiced by the participants include the technical and instructional barrier. The technical barriers dealt with the obstacles related to the course management system and issues of hardware and software. The second barrier dealt with barriers of classroom management, course management skills, and instructional design.

Technical

According to the voices of the participants, technology barriers influenced their experience in teaching online courses. Similar to the technical barriers for developing online courses, technical barriers for teaching online courses involved the course management system. The course management system was plagued with technical issues. The fact that the course management system had poor functionality, was down, and did not interface well with other software program, led participants to become frustrated with the course management system. This presented an obstacle for participants who

wanted to upload content, participate in discussion boards, or even chat with students online.

Additionally, when the course management system had to be updated by the system office, patches to the system had to be installed on local hard drives, as well as, a system wide roll out for more severe technical issues. Since the course management system had several technical malfunctions, it was occasionally taken down for maintenance and thus users could not log on to the system to upload content, interface with students with instructional interactions, or facilitate discussion on readings or other course materials. This made the system unreliable for teaching. Students and faculty alike couldn't logon into the system to work. Additionally, participants who taught online courses had to deal with the issue of hardware and software failures. Sometimes the printer and other peripherals would not work and thus IT had to be called out to troubleshoot the problems. This took away valuable time one could use to facilitate learning in an online course.

Instructional

Another barrier that influenced participant's ability to teach online courses dealt with the area of instruction, including course and classroom management and implementing an instructional system where students could navigate to access course materials. Participants had problems designing their online course to meet the usability needs of the students. As a result, there was a high degree of chaos in some courses. This presented a challenge with not how to provide information to the students, but how

to present a navigation structure that was helpful and useable in finding information or course documents.

Instructional roadblocks presented additional barriers, due to the fact that participants had to learn very quickly that it's important to tell students more than once and in multiple ways where they needed to post particular assignments, where the requirements for the assignments were located, and where to find course expectations and grading criteria. The challenge was to make everything very clear. Participants had to spell everything out in layman terms in order to reduce student confusion and the onslaught of emails with repetitive questions. This challenge was not about getting the content in a user-friendly form, but getting students to understand how to navigate through the course, while at the same time redesign and redevelop portions of the course while teaching.

Additionally, the issue of student technology skills came into play. Due to the fact that students did not know how to use the course management system and in some cases had limited computer application and internet skills, resulted in students emailing faculty on how to perform various functions of the course management system. Faculty not being technology or course management system experts became frustrated not just at the onslaught of emails, but also the fact that their graduate students did not possess the necessary technology skills and abilities to be successful in graduate school. Faculty would spend considerable time responding to technical related emails, which interfered with the teaching aspect of the course.

**Research Question 3: What Benefits of Developing and Teaching Online Courses
Were Shared by Public Health Faculty?**

Benefits for developing and teaching online courses are divided by activity. The benefits as shared by public health faculty from this study for developing online courses include the benefit of design innovation, accessibility, and new methods of instructional delivery. Benefits associated with teaching online courses, as shared by the public health faculty in this study include the benefit of convenience, access and availability for students, access and penetration to a global market, and instructional innovation.

Benefits of Developing Online Courses

The participants indicated that developing online courses presented them with the opportunity to transform their thinking, assumptions, expectations, and attitudes towards online learning. Participants voiced that this was a benefit. Many started with a negative opinion of online learning; however, through the process and activities of developing their online courses, they began to see the realities of online learning and how different the reality was from their assumptions.

Developing online courses also allowed participants to learn new approaches to teaching and learning, new approaches to student engagement and active learning strategies, as well as new approaches to designing and course planning. Developing online courses provided the benefit of innovation in course design by incorporating new technologies such as digital video, multimedia, and flash animation. Further, developing online courses allowed for greater global access to public health knowledge and

education, thereby meeting global market and competition demands. Lastly, developing online courses presented new methods for delivery instruction with technology.

Benefits of Teaching Online Courses

Benefits for teaching online courses, as shared by the participants, dealt with the convenience factor. Participants shared that they could teach anywhere, at anytime, and they were no longer bound by time and space. This was a great benefit to faculty who had administrative roles and teaching responsibilities. No longer did participants' teaching roles interfere with their administrative roles and vice versa. Additionally, teaching online allowed the participants to become more available to the students. Participants used the online course as a platform for office hours, student contact, and communication. There were more opportunities to be available to students. Further, teaching online courses allowed a greater access to public health knowledge by broadening the access to such knowledge and information. Now that courses were online, students from around the globe could take part in the public health knowledge production and knowledge acquisition process, thereby taking knowledge back to their home countries and implementing new modes of thinking and frameworks to improve public health conditions in their respective countries.

In addition, teaching online courses as shared by participants allowed them to become innovative in their instructional approaches in both their face-to-face and online courses. Tools, strategies, and frameworks learned were used to improve the levels of instruction and engagement in their face-to-face courses. According to the participants, this a major benefit. Moreover, teaching online allowed the participants to discover and

implement new approaches to student engagement and active learning. Participants shared that now with online learning, students could now be an active participant in class and interact with not only the instructor, but their peers, and the content. Finally, teaching online, as shared by the participants, allowed learning to become rigorous, but at the same time fun and enjoyable to the students and faculty alike.

Summary

In Chapter VI, research questions one, two and three were explained, providing details to the experience of public health faculty who develop and teach online courses, the challenges and barriers voiced during the experience, and benefits shared as a result of developing and teaching online courses. In the final chapter, conclusions are addressed regarding the experience of public health faculty who develop and teach online courses.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Participants' Textural-Structural Description Discussion

This phenomenological study explored the experiences of five public health faculty who developed and taught online courses at a particular school of public health located in the Southwest region of the United States. Through a recursive analysis of the transcription of each semi-structured interview, analysis of written narratives, and analysis of artifacts, the researcher identified the experiences of and the underlying structures for developing and teaching online courses for the study's participants. This chapter discusses the results of the study, its limitations, recommendations for future research, and final conclusions.

How Participants Recalled Their Experiences

Research Question One: How Do Public Health Faculty Describe Their Experience of Developing and Teaching Online Courses?

Faculty Experience

According to the study's findings, the essence of public health faculty who develop and teach online courses reveals an experience that is shaped by and involves a congruence of interactions between participants' individual perspectives (knowledge and abilities needed to develop and teach online courses), a technological system (the availability and capacity of technology tools to facilitate the development and teaching of online courses), and an organizational perspective (a social, technical, and political system that influences faculty ability to develop and teach online courses), resulting in a

transformative process, where public health faculty challenged their assumptions and thinking concerning online learning, their roles as faculty in an online learning environment, and ultimately their teaching practices, as they emerge as participants in online learning.

Participants of the current study revealed through the narrative data, that when online courses are developed and taught, public health faculty experience the same experiences as other faculty experience from other content fields. This reality, based on the participants' narratives, confirms the literature that discusses the experiences of faculty from other domains of learning and is consistent with the work of Grosse (2004), Kyei-Blankson, (2009) and Reeves and Reeves (2007) who point out that the experience of developing and teaching online courses is often a difficult and frustrating experience for faculty. Specifically, public health faculty perceived online course development as a daunting and difficult task. This is consistent with Grosse (2004) who found that faculty developing and teaching online courses, in addition to transitioning to online teaching, found online teaching difficult, due to the pedagogical, technical, and curricular shifts that needed to take place.

Participants from the current study also reveal that developing online courses was a complex activity that often resulted in frustration. This is consistent with Barker, (2003) and Kyei-Blankson (2009) who state that developing online courses and developing faculty to teach online is a complex challenge brought on by time spent learning new technologies, new methods of teaching, frustration with malfunctioning technology, lack of institutional and peer support, and lack of training. In addition,

Gerlich (2005, p. 8) confirmed that developing and teaching online courses presented a steep learning curve which included learning new technologies and methods of online teaching. Further, this study found that while developing online courses was a daunting and difficult task, teaching online courses was found to be as equally difficult, confirming the works Franklin and Blankson (2001), Lorenzetti (2004), Nelson and Thompson (2005), Conceicao (2006), Bruner (2007), Sugar, Martindale, and Crawley (2007), and Kyei-Blankson (2009) who discuss the frustrations of online faculty with changes in teaching methods, teaching environment, working with course management systems, and with new time requirements.

In addition, participants from this current study had to deal with new time commitments for being online for students, an increased workload of grading papers and interacting with students, as well as learning new technology tools and the functions of a course management system. These challenges, along with the difficulties of developing online courses are found to be consistent with the findings of Lao and Gonzalez (2005) and Wegmann and McCauley (2008) who found that instructors who developed and taught online felt teaching online was difficult due to technological constraints, increased labor intensive work in terms of grading, responding to student responses, facilitating learning experiences, and managing the course itself.

Experience with Transformation

Relating to the experience of public health faculty who develop and teach online courses is the concept of transformation. Narrative data from the current study suggests that public health faculty undergo a transformation process as a result of developing and

teaching online courses. This included a transformation or transition in thinking. This transformation in thinking led to an increase in intellectual capacity concerning online learning, online development, and its associated teaching practices. This is consistent with the findings of Grosse (2004) who found that faculty who developed and taught online had to fundamentally change their thinking in regards to teaching methods to meet the needs of developing and teaching online courses. Moreover, negative preexisting assumptions and traditional teaching practices changed to be accommodating and accepting to online course development and teaching. This supports the findings of Li and Atkins (2005), Appana (2008), and Fish and Gill (2009) who conclude that subscribing to preexisting myths of online learning hinders faculty full participation in online learning and therefore must be changed if one wishes to become successful in online teaching. Johnson (2008) also confirms the assertion of a negative attitudinal change and assumptive thinking. He states that online teaching forces instructors to question and change their assumptions regarding online learning and that it is imperative for instructors to challenge and release preconceived negative assumptions in order to be successful as online instructors.

Experience with Faculty Roles

Findings of this current study are also consistent with the work of Lee and Busch (2005) who confirmed that if faculty wish to develop and teach online courses and become successful online instructors, they must change their roles associated with their teaching practices and thinking concerning not only an online environment, but also how learning will be shaped and facilitated online. The emergent data of the current study

suggests a transition from a traditional lecturer or “sage on the stage” to that of a “course facilitator”, where public health faculty would guide students through a process of knowledge construction and acquisition through the use of technology tools including discussion boards, digital media, and video. This is consistent with Xu and Morris (2007) who argued that the role of the faculty is to guide student learning with the use of constructivist learning perspectives where adults create their own knowledge. This current study found that a shift in teaching practice was a result of public health faculty undertaking the process and activities of developing and teaching online courses. Due to a shift in the teaching environment, from a behaviorist lecture driven, teacher centered environment, to a more constructivist student learning environment, participants in the study suggest that the “sage on the stage” concept of instruction was no longer feasible for the online environment or for student learning, reinforcing the works of Xu and Morris (2007).

In addition, findings from the current study are consistent with the work of Sieber (2005) who found that instructors, including first time instructors, reflect on their roles as focused largely as content developers and deliverers of content as subject matter experts. However, in this current study, participants took on additional roles in order to develop and teach online courses. These new roles and responsibilities collectively center around the four prevailing constructs, pedagogical, social, managerial and technical, meaning facilitator, course designer, course developer, course manager, grader, assessor, technologist, and discussant. This is consistent with the work of Coppola, Hiltz, and Rotter (2002) and Liu, Kim, Bonk, and Magjunka, (2007) who

identified three roles that emerge as faculty develop and teach online courses. These roles include the cognitive role, the affective role, and the managerial role. The cognitive role dealt with connecting students to mental processes of learning, information storage, and thinking. The affective role dealt with the relationships between students, faculty, and the classroom environment. Lastly, the managerial role dealt with class and course management. In analyzing these findings, the authors described these roles as a change in teaching. They further articulate that this change in teaching is due to the online environment and the process of developing and teaching online courses, which the current study suggests. Although these roles were found to be consistent with the participant in the current study, additional roles emerge as well including the role of discussant or discourse facilitator, instructional facilitator, creator of a social environment, designer of the educational learning experience, and the instructional designer. This is consistent with the findings of Riffée (2003) who found that faculty who develop and teach online courses take on the role of facilitator, teacher, organizer, mentor, coach and counselor and is also consistent with the work of Ali, Hodson-Carlton, Ryan, Flowers, Rosem, and Wayda (2005), Conceicao (2006), and Panda and Mishra (2007) who contend similar findings.

Experience with Time

The type of experience lived by public health faculty who develop online courses was found to be linked to the length of time available and used to develop their perspective courses. When ample time is available to faculty to develop online courses (i.e. one semester or more), the experience lived suggests a more favorable outcome as

opposed to faculty who develop online courses under short time constraints. Those who developed courses under short time constraints experience a negative and painful experience developing online courses. Therefore, one may argue that the experience of developing and teaching online courses is also shaped by the length of time faculty have to develop the course. This is consistent with the work of Conceicao (2006) who found that time was a critical factor in the process of developing and teaching online courses. She said that compared to traditional teaching, developing and teaching online courses requires more development and design time. In other words the time and efforts spent on online course development and delivery is greater than that of traditional classroom teaching. She also found that in her study faculty complained about not having enough time to develop their online courses. This resulted in frustration and stress, similar to what participants in this current study experienced.

Experience with Faculty Development, Training, and Support

This current study also suggests that the individual perspective including knowledge, skills, abilities, attitudes, and beliefs, a technology system including tools and devices, and organizational support influence the experience of public health faculty who develop and teach online courses. This is supported by the works of Appana (2008), Macy (2007), Mitchell and Geva-May (2008), and Simpson (2010).

Specifically, when faculty development and training is provided in the form of one-on-one instructional coaching, coupled with organizational support including resources, along with the assistance of instructional design personnel and a teaching assistant, the participants' experience developing and teaching online courses can be seen as a positive

more favorable experience. This is also consistent with the works of Appana (2008), Mitchell and Geva-May (2008), and Simpson (2010) who contend that training and support are critical to the process of online course development and faculty participation in online learning. Further, these characteristics are perceived to be important to the process and activity of developing and teaching online courses in this study. Related to these findings are the works of Conceicao (2006) and Conrad and Pedro (2009) who states that time, efforts, training, support, and compensation are critical to the process and activities of developing and teaching online courses.

Support, as these authors contend, included instructional design support. Instructional design support personnel that was provided was found to guide faculty through the course design and development phase, while the teaching assistant served in the capacity of grading assignments, providing faculty with technical course management system assistance, and facilitating discussion board discussions. Conceicao (2006) and Conrad and Pedro (2009) further conclude that the development and delivery of online courses depended on the experience of the instructor and the level of institutional support that take place in the form of pedagogical training, technical assistance, monetary compensation and personnel that are relevant and helpful in developing and teaching online courses.

Lastly, Conrad and Pedro (2009) revealed that support and compensation have been proven to be important aspects of the online course development and teaching experience. These findings are consistent with the findings of the current study; however, this study found that the support of an instructional designer and a teaching

assistant is more important and highly valuable in the process and activities of developing and teaching online courses than monetary compensation. Thus the current study suggests that an instructional designer and a teaching assistance is an important factor in the shaping of the experience of public health faculty who develop and teach online courses.

Experience with Resources

The current study also suggests that the value placed on resources shifts as public health faculty navigates through online course development activities and when teaching online. Electronic and print resources were perceived as less valuable in the process of developing and teaching online courses, while instructional design support staff and a teaching assistant were seen as valuable to the associated activities for online learning.

Experience with Rewards

The current study also suggests that public health faculty experience intrinsic and extrinsic rewards that form benefits. These include increased opportunities for access to learning and to public health knowledge, flexibility of scheduling, teaching, improved faculty-student interaction, and intense student participation. This is consistent with the research of Clark-Ibanez, (2008) who discovered that convenience, access to learning, and student participation were benefits to faculty teaching online courses.

However, the current study extends the benefits discussed by Clark-Ibanez (2008) and suggests how opportunities exist including the benefit of learning new approaches to teaching and learning, learning new approaches to student engagement, as well as new approaches to designing and course planning, which are consistent with the

works of Reeves and Reeves (2007) and Conrad and Pedro (2009) who conclude that faculty who develop and teach online increase their teaching skills by learning new methods in how to teach, student engagement and in instructional course design.

Additionally, the current study found other benefits to include new methods of course design that incorporates new technologies such as digital video, multimedia, and flash animation to relay content to various audiences. This finding is supported and is found to be consistent with the conclusion of Davidson (2005), who reports that the incorporation of multimedia is a significant benefit to online learning due to the fact that multimedia enhances the learning experience of online students. In addition, teaching online courses allowed participants to become innovative in their instructional approaches in both their face-to-face and online courses. This is consistent with Davis (2005) and Kyei-Blankson (2009) who conclude that strategies for online learning in particular, rich media and multimedia strategies for classroom engagement can be used in both online and face-to-face teaching environments. From these authors' perspective and from participants in this current study, this attribute was seen as a benefit. Lastly, this study found that the tools, processes, strategies, and frameworks learned for developing and teaching online courses were used to improve the levels of instruction and engagement within face-to-face courses. This was found to be a major benefit to developing and teaching online courses and is consistent with the findings of Reeves and Reeves (2007).

How Participants Experienced Roadblocks

Research Question Two: What Barriers and/or Challenges Were Voiced by Public Health Faculty Who Develop and Teach Online Courses?

Barriers and challenges as voiced by participants in this current study were viewed from multiple perspectives and are contextualized within a frame of roadblocks. These roadblocks manifested themselves in a psychological, organizational, technical, instructional, and time fashion. Psychological roadblocks refer to barriers associated with assumptive thinking regarding the nature and quality of online learning, fear or apprehension of change, fear related to the unknown and uncertainty, fear of safety and loss of social interaction. Organizational roadblocks refer to barriers associated with the lack of connection to policy and organizational fit, lack of rewards/incentives, lack of training opportunities, lack of resources and personnel support, and the complexity of participant's role with administrative responsibilities. Technical roadblocks refer to issues relating to the course management system, issues with hardware and software, and issues dealing with learning new technology tools. Instructional roadblocks refer to classroom management, course management skills, and course instructional design issues. Lastly, the time roadblock dealt with the element and interval of the temporal length needed to participate in activities related to developing and teaching online courses.

Roadblocks to Developing Online Courses

Psychological Roadblocks

Psychological barriers dealt with the cognitive or mental aspect of how participants thought about online learning. Participant's thinking, perceptions, and beliefs towards online learning were largely influenced by past experiences, assumptions, and interactions with other faculty in academia. This caused participants in the current study to accept and believe negative suppositions and opinions concerning the quality and nature of online learning. This in turn influenced participants in their pursuits to develop and teach online courses, which ultimately led them to a state of apprehension and fear. As such, their thinking about online learning and fear became a barrier, due to the fact that they could not move past their negative assumptions of online teaching and learning. As participants undertook the activities of developing and teaching online courses, they found themselves in a state of dissonance, struggling to change their thinking about online learning. These roadblocks are found to be consistent with the prevailing literature on barriers associated with online learning. In particular, Li and Atkins (2005), Appana (2008), and Fish and Gill (2009) who conclude that subscribing to preexisting myths of online learning, assumptions concerning the nature of learning and mode of learning, hinders faculty full participation in online learning and therefore must be changed, if one wishes to become successful in online teaching.

These roadblocks, along with their lack of experience in online learning, led them into a state of apprehension to develop and teach online courses. Supporting this

contention and barrier is the work of Appana (2008). This particular author concludes that a major barrier or limitation to faculty participation in online learning is the experience and knowledge of the instructor. This assertion was found to be evident in this current study.

The lack of experience and knowledge of online learning, coupled with negative predisposition of online learning, led to apprehension about changing their thinking concerning online learning or their traditional teaching style. As participants continued to hold on to their previous forms of thinking and their traditional teaching styles, this roadblock became a barrier when trying to use online learning methods to teach in an online environment. Supporting this contention are the works of Bruner (2007), Conceicao (2006), Franklin and Blankson (2001), and Yang and Cornelious (2005) who each document that the pathways of traditional course migration to online environments often began with the assumption that instructional designs, grading procedures, and other methods that typically worked in the traditional classroom would remain the same in online settings. However, in their work, they discovered that when faculty came to terms with the reality that these two environments are entirely different, they suddenly become frustrated and apprehensive about continuing the course migration process. However, the activity of developing and teaching online courses would provide participants in this study with the opportunity for psychological transformation, in addition to, growth and reflection, concerning their thoughts about online learning. The transformative nature of online learning is well documented in the literature (Grosse, 2004; Conceicao, 2006; Conrad, 2004; Kyei-Blankson, 2009; Li & Atkins, 2005; Reeves & Reeves, 2007;

Tallent-Runnels et al., 2006). These authors support the contention that online learning helps transform faculty thinking in regards to online learning.

An additional roadblock within the psychological barriers discussion is the idea of fear of safety and loss of social interactions. When experiencing fear of safety and the loss of interactions with students, participants described this roadblock as a source that stimulated their fear toward developing and teaching online courses. Participants experienced concern for the loss of face-to face-interaction. This roadblock is supported in the literature by the works of Campbell (2006) who suggests with the new teaching roles online, faculty members have expressed concerns for loss of personal and intimate interactions with their online students. Further, authors found that the impersonal nature of the online environment was a barrier to faculty participation in online learning.

Organizational Roadblocks

A second barrier to developing online courses as voiced by the participants dealt with the organizational aspect. Organizational roadblocks that become barriers to online learning has been widely documented in the literature (Berge & Muilenburg, 2001; Conceicao, 2006; Liu, Kim, Bonk, & Magjuka, 2007; Kim & Bonk, 2006; Mitchell & Geva-May, 2008; Maguire, 2005; Nelson & Thompson, 2005; Nkonge & Gueldenzoph, 2006; Pajo & Wallace, 2001; Panda & Mishra 2007; Porter, 2003; Parthasarathy & Smith 2009; Simpson, 2010). Organizational roadblocks that formed barriers within this current study included issues related to organizational fit and policy incongruence to the mission, vision, or goal of the school's outreach program, and to the participants' activities of developing and teaching online courses. This barrier is supported and

consistent with the work of Simpson (2010) and Michell and Geva-May (2008). Both authors suggest that problems arise with faculty resistance to online learning and are due to a lack of fit between policy and its context, namely the organization and the actors within the organization. They contend that the closer the fit, the lower the level of resistance; hence a greater chance that faculty will participate in online learning. This is consistent with what was found in this current study related to organizational policy roadblocks.

In addition, the lack of rewards for online learning became a roadblock for participants in this current study. Although participants saw developing and teaching online courses as extra duty or ancillary to their faculty appointment, there were no tangible rewards to pursue such activity. Developing and teaching online courses took a great amount of time, energy, and resources, only for participants to not receive any reward for their hard work. This left participants apprehensive to invest in developing and teaching online courses. This barrier is supported by the works of Anderson as cited in Green, Alejandro and Brown, (2009), Bonk (2001), Conceicao (2006), Howell, Saba, Lindsay, and Williams (2004), Nelson and Thompson, (2005), Orr, Williams and Pennington (2009), and Simpson (2010). They contend that the lack of compensation and incentives deterred faculty's participation in online learning. Further, these authors support this assertion by documenting the perceptions of lack of perceived benefits for online learning for faculty. They found that institutions' recognition of faculty efforts to teach online in relation to the traditional concepts of scholarship, tenure, and promotion was an important motivational factor for sustaining effectiveness in an online learning

environment, and that if faculty could not use online learning as a component of tenure and promotion; they were less likely to participate in online teaching. This assertion can be suggested from this current study. This is consistent with what was found in this current study related the lack of rewards roadblocks.

Organizational fit, along with the lack of rewards or incentives, coupled with the lack of opportunities for faculty development and training, became another roadblock for participants in this current study. Without formalized faculty development and training for developing and teaching online courses, participants did not have grounding, skills, or knowledge to engage in the activities of developing and teaching online courses. This led to barriers associated with course design, course development, and uncertainty in how to teach online. This ultimately led to concerns for course quality and student learning. This barrier is consistent with the work of Saba (2005) who found that faculty who taught online were unsure as to how to teach in this new environment, due to a lack of skills and experience in an online environment. The importance of faculty development and training in relation to faculty participation in online learning is well documented in the literature (Appana, 2008; Brooks, 2003; Conceicao, 2006; Crawford, 2003; Ensminger & Surry, 2002; Hinson & LaPraire, 2005; Johnsrud, Harada, & Tabata, 2006; Kosak, Manning, Dobson, Rogerson, Cotnam, Colaric, & McFadden, 2004; Kyei-Blankson, 2009; Macy 2007; Maguire, 2005; McLean, 2005; Nelson & Thompson, 2005; Pajo & Wallace, 2001; Reeves & Reeves, 2007; Saba, 2005; Shea, Pickett, & Li, 2005; Tallent-Runnels et al., 2006). These authors all contended that the lack of faculty development and training and inadequate faculty development and training is a potential

barrier to faculty participation in online learning, which make faculty reluctant to teach online. Further these authors contend that with a lack of knowledge and experience of online learning, issues of course quality, student learning, and faculty effectiveness become major concerns that help reinforce and perpetuate negative assumptions concerning online learning. This lack of knowledge and lack of preparation by institutions ultimately leads to online instruction that lacks continuity and quality; therefore, as stated by these authors, it is imperative that faculty receive faculty development and training relating to online learning, in order to be successful participants in developing and teaching online courses. This is consistent with what was found in this current study relating to the roadblocks associated with faculty development and training.

The lack of resources including materials and personnel support became obstacles for participants as they worked to develop and teach online courses. Without resources such as hardware, software, equipment, or instructional design personnel support, participants could not develop their online courses or implement them for online distribution. This presented a major obstacle to the activities of developing online courses. This is consistent with the works of Conceicao (2006), Liu, Kim, Bonk, and Magjuka (2007), McLearn (2005), Maguire (2005), Nelson and Thompson (2005), Nkonge and Gueldenzoph (2006), Rockwell, Schauer, Fritz, and Marx (2000) who conclude that the lack of resources including equipment, administrative support, and personnel were barriers to faculty participation in online learning. Further, consistent with this point is the fact that these authors evaluated the types of education, assistance,

and support that faculty felt were needed in order to be successful in online learning. They concluded that assistance and support for developing instructional materials, developing interaction, and applying certain technologies were critical to faculty success in online environments. They further suggest that faculty need additional instructional and technical support, due to their concerns about course quality and the amount of technical assistance and training needed to accomplish their online learning needs.

Further, issues of faculty roles were a roadblock to overcome. Having dual roles, both an administrative role such as associate dean, regional dean, and division director and the role of faculty, presented another roadblock for participants in this current study. This barrier manifested itself when the administrative responsibilities interfered with participants' teaching responsibilities to develop online courses. Those who held both roles found that they had little time to develop their online course, due to a conflict of administrative responsibilities within their teaching position. This caused frustration when participants, who were administrators, tried to pursue the activities of developing online courses. They found themselves entrenched in their administrative responsibilities and found little time to develop their online courses. This barrier is consistent with the work of Dabbagh (2004), Lorenzetti (2006), who cautioned faculty to take time to understand the different roles and responsibilities of online teaching in relation to their current work. Also supporting this contention is the work of Sellani and Harrington (2002), who found that faculty became overwhelmed with designing online courses and their other demands as faculty, including research and service commitments, interfered and caused workplace stress. The authors also found the amount of time and

heavy work load needed for online teaching was a major barrier and that faculty in their study, showed specific concerns about striking a balance between teaching, quality, and time spent on one's online courses.

Technological Roadblock

An additional roadblock that formed a barrier that influenced the participants' ability to develop online courses at this particular school of public health dealt with issues of technology. Not only did participants voice that they had to learn the functionalities of multiple software and hardware programs, participants also voiced that they had to learn how to use the tools in the context of developing online and teaching courses. These roadblocks are consistent with the works of Brooks (2003), Feist (2003), Maguire (2005), Pajo and Wallace (2001), and Simms (2002) who suggests that faculty need to learn new technologies in order to teach online courses as a factor associated with teaching online courses. Additionally, participants in this current study had to learn how to use a course management system, which was often plagued with technical problems. The fact that the course management system was not user friendly, hard to use, had major technical problems, was down for troubleshooting, and lacked operational functions, led participants to become frustrated with the course management system. This presented an obstacle for participants who wanted to upload content and other course files and materials to the course management system. Since the course management system had system integrity issues, the course management system was not reliable for uploading content and media files.

Additionally, participants who developed online courses had to deal with the issue of hardware and software failures as well. This presented an additional obstacle for participants when trying to develop and package course content to upload to the course management system. These roadblocks associated with the technical side of online learning is consistent with the works of Macy (2007) who noted that technical support as a primary concern that may prevent faculty from teaching online courses. Further, the works of Lari and Wiessener (2005), Smith (2001), Perreault, Waldman, Alexander, and Zhao (2002) support and confirm this barrier. They conclude that key problems arise with technology in reference to online learning. These include: (1) reliability of technology, (2) technology support provided by the institution, (3) student technology competence, and (4) teacher technology competence. They also concluded that technical issues and challenges are primary determinants as to whether or not faculty would persist as online instructors and that malfunctioning technology and the time spent learning to use new technologies added to the frustration and barriers that influence faculty participation and their response to online learning. These findings of the authors' studies are consistent with the technical roadblocks presented in this study.

Instructional Roadblock

Another barrier that influenced participants' ability to develop online courses, as voiced by the participants, dealt with the instructional area. Participants had the challenge of designing their online courses in a systematic fashion that met student learning needs. As a result, participants faced uncertainty as to how the course would be implemented. Additionally, the technical abilities of students were found to be an issue

when participants developed their online course. Unaware of the students' technology ability, participants could not anticipate the technical challenges that may erupt as students took their course and therefore could not design their courses to compensate for this obstacle. Supporting this contention and barrier are the work of Alvarez, Monske, and Wolfe, (2005), Dempsey, Fisher, Wright, and Anderson (2008), Palloff and Pratt (2001), Panda and Mishra (2007). They conclude that online learning requires moving beyond traditional pedagogy to adopt new practices, while at the same time rethinking and retooling teaching practices for online learning. Further, they suggest that faculty cannot be expected to know intuitively how to design and deliver effective online courses. They also revealed that faculty should be exposed to techniques and methods needed to make online learning successful. Lastly, these author suggest that faculty using online learning and its related technologies face a variety of challenges when adapting their teaching styles to a framework compatible with the distance learning environment, such as, creating online communities. This adaptation may present challenges as faculty seek to participate in online learning. This is consistent with the findings of this current study.

Time Roadblock

The last barrier associated with this study is the concept of time. This was found to be a major roadblock to overcome. Participants described and voiced this barrier as a "race against time." With the complexities of being prepared to develop online courses, as well as learning multiple tools to be successful in the process, instructional design methods for course planning, course design, and the interference of administrative roles,

participants saw developing online courses as “a devourer of time”, leaving them with the feeling that there was not enough time to develop online courses. These results are consistent with the works of Gerlich (2005), Grosse (2004), Hartman, Dziuban, and Moskal, (2000), Sellani and Harrington (2002) and Lao, and Gonzales (2005). They concluded that faculty regarded online learning as more difficult than teaching traditional courses, due to increased time commitments and workload increases, due to more interaction with students. Additionally, these authors found that faculty became overwhelmed with designing online courses, in addition to their other responsibilities that included research and service commitments. This level of work interfered and caused workplace stress, thus becoming a roadblock for developing online courses.

Roadblocks to Teaching Online Courses

When teaching online courses, barriers and challenges as voiced by the participants include the technical and instructional barrier. These barriers are the same as for developing online course and are supported with similar key pieces of the literature. Technical barriers dealt with the obstacles related to the course management system and issues of hardware and software. The second barrier deals with the barriers of classroom management, course management skills, and instructional design.

Technological Barrier

According to the voices of the participants, technology barriers influenced their experience in teaching online courses. Similar to the technical barriers for developing online courses, technical barriers for teaching online courses involved interaction with the course management system. The course management system was plagued with

technical issues. The fact that the course management system had poor functionality, was down, and did not interface well with other software program, led participants to become frustrated with the course management system. This presented an obstacle for participants who wanted to upload content, participate in discussion boards, or even chat with students online.

Additionally, when the course management system had to be updated by the system office, patches to the system had to be installed on local hard drives, as well as, a system wide roll out for more severe technical issues. Since the course management system had several technical malfunctions, it was occasionally taken down for maintenance and thus users could not log on to the course management system to facilitate learning. This made the system unreliable for teaching. Students and faculty alike couldn't logon into the system to work. This took away valuable time one could use to facilitate learning in an online course.

Instructional Barrier

Another barrier that influenced participants' ability to teach online courses dealt with the area of instruction, including course management, classroom management, and implementing an instructional system, where students could navigate and access course materials. Participants had problems designing their online course to meet usability needs of students. As a result, there was a high degree of chaos in some courses. This presented a challenge with not how to provide information to students, but how to present a navigation structure that was helpful and useable in finding information or course documents. This presented a challenge, due to the fact that participants had to

learn very quickly that it's important to tell students more than once and in multiple ways where they needed to post particular assignments, where the requirements for assignments were located, and where to find course expectations and grading criteria. The challenge was to make everything very clear. Participants had to spell everything out in layman terms in order to reduce student confusion and the onslaught of emails with repetitive questions. This challenge was not about getting the content in a user-friendly form, but getting students to understand how to navigate through the course while at the same time redesign and redevelop portions of the course while teaching.

Additionally, the issue of student technology skills came into play. Due to the fact that students did not know how to use the course management system and in some cases had limited computer application and internet skills, resulted in student emailing faculty on how to perform various functions of the course management system. Faculty, not being technology or course management system experts, became frustrated not just at the onslaught of emails, but also at the fact that their graduate students did not possess the necessary technology skills and abilities to be success in graduate school. Faculty would spend considerable time responding to technical related emails, which interfered with the teaching aspect of the course.

How Participants Experienced Rewards

Research Question Three: What Benefits of Developing and Teaching Online Courses Were Shared by Public Health Faculty?

Rewards that formed benefits for developing and teaching online courses were identified by activity. The benefits as shared by public health faculty from this study for

developing online courses include the benefit of design innovation, accessibility, and new methods of instructional delivery. Benefits associated with teaching online courses, as shared by the public health faculty in this study, include the benefit of convenience, access and availability for students, access and penetration to a global market, and instructional innovation. These suggestions are consistent with the literature on extrinsic incentives (e.g. exposure to new technologies) and intrinsic incentives (e.g., flexible teaching schedule) to teach online (Appana, 2008; Bartolic-Zlomislic & Bates, 1999; Britt, 2006; Clark-Ibanez, 2008; Conceicao, 2006; Conrad & Pedro, 2009; Coyner & McCann 2004; Curtis & Lawson, 2001; Koehler, Punyashloke, Hershey, & Peruski, 2004; Kyei-Blankson, 2009; Li & Akins, 2005; Maguire, 2005; Parker, 2003; Scott, Aragon, Shaik, & Palma-Rivas, 2000; Stick & Ivankova, 2004; Taylor, 2002).

Rewards and Benefits for Developing Online Courses

Participants indicated that developing online courses presented them with the opportunity to transform their thinking, assumptions, expectations, and attitudes towards online learning. Participants voiced that this was a benefit. Many started with a negative opinion of online learning; however, through the process and activities of developing their online courses, they began to see the realities of online learning and how different the reality was from their assumptions. This is consistent with the work of Li and Atkins (2005), Fish and Gill (2009) and Nelson and Thompson (2005) who assert that online learning and preparing faculty for online learning helps faculty to overcome negative dispositions and dispel online learning assumptions. This was found to be consistent with this study.

Developing online courses also allowed participants to learn new approaches to teaching and learning, new approaches to student engagement, active learning strategies, as well as new approaches to designing and course planning. This is consistent with the works of Appana (2008), Conrad and Pedro (2009), Convington, Petherbridge, and Warren (2005), Kyei-Blankson (2009), Reeves and Reeves (2007), and Tallent-Runnels et al., (2006). They confirm that online learning allows instructors the opportunity to keep up-to-date about new developments in technology and instruction. Faculty are able to learn new skills for teaching and active student learning. They further contend that the online teaching experience allows faculty to improve their teaching and forced them to rethink the way they deliver instruction, how they assess their students, and their role as faculty. Lastly, these authors suggest that faculty working with instructional design personnel enhances faculty ability to design effective online courses. These findings are all consistent with this current study.

Developing online courses provided the benefit of innovation in course design by incorporating new technologies such as digital video, multimedia, and flash animation. This is supported by the work of Davis (2005) who states that the learning experience brought on by multimedia is a significant benefit of online learning. Akdemir (2008) supports this assertion by suggestions that that ICT's have created more opportunities for interactivity between instructors and students and among students themselves. Palloff and Pratt (2001) and Xu and Morris (2007) support this work as well, due to the fact that they contend that using synchronous or asynchronous communication techniques allow

students to be engaged with one another in their discussions. Further, these authors contend that online courses encourage team building and group-work.

Further, developing online courses allowed for greater global access to public health knowledge and education, thereby meeting global market and competition demands. These benefits are consistent with the works of Mitchell and Geva-May (2009) and Parthasarathy and Smith (2009), who suggest that online learning has the potential to tap into markets, both national and international, that cannot be easily accessed with other more traditional forms of course or program delivery.

Rewards and Benefits for Teaching Online Courses

Rewards and benefits for teaching online courses, as shared by the participants, dealt with the convenience factor. Participants shared that they could teach anywhere, at anytime, and they were no longer bound by time and space. This was a great benefit to faculty who had administrative roles and teaching responsibilities. No longer did the participants' teaching roles interfere with their administrative roles and vice versa. This is consistent with the work of Conceicao (2006), Hammonds (2003), Lyons (2004), and Reeves (2003). According to these authors, faculty can enjoy the flexibility of teaching at home instead of going to campus, and there are fewer hours spent preparing instructional materials for students. They further contend that online learning overcomes obstacles in a traditional class that may prevent students who are unable to attend classes for any reason from completing their education. This is found consistent with this current study.

Additionally, teaching online allowed participants to become more available to the students. Participants used online courses as a platform for office hours, student contact, and communication. There were more opportunities to be available to students. This is consistent with the works of Taylor (2002) who purports that online learning encourages student inter-communication and provides student feedback from their peers as well as from their instructor that makes them feel an integral part of the course.

Further, teaching online courses allowed greater access to public health knowledge by broadening the access to such knowledge and information. Now that courses were online, students from around the globe could take part in public health, thereby taking the knowledge back to their home countries and implementing new modes of thinking and frameworks to improve public health conditions in their respective countries. This is consistent with Reeves (2003) who states that online learning provides a viable option for those who did not have the opportunity before due to geographic location constraints. Dempsey, Fisher, Wright, and Anderson (2008) also support this work. They suggest that online learning provides greater access to educational opportunities for those who are disenfranchised by distance or temporal constraints. For public health, Edouard et al. (2009) state that the benefit for online learning in public health is the benefit of collaboration between institutions. Institutions could extend their geographical, cultural, and contextual reach and expand its teaching in a socio-cultural or geographical-specific contexts and applications.

In addition, teaching online courses as shared by participants allowed them to become innovative in their instructional approaches in both their face-to-face and online

courses. Tools, strategies, and frameworks learned were used to improve the levels of instruction and engagement in their face-to-face courses. According to the participants, this is a major benefit and is found consistent with Conceicao (2006).

Moreover, teaching online allowed participants to discover and implement new approaches to student engagement and active learning. Participants shared that now with online learning, students could now be active participants in class and interact with not only the instructor, but their peers, and the content. Finally, teaching online, as shared by participants, allowed learning to become rigorous, but at the same time fun and enjoyable to students and faculty alike, which is found to be consistent with Bonk (2006).

The current study results also relate to other aspects of the experience of public health faculty developing and teaching online courses and the elements that contribute to that experience. This discussion, as revealed from the current study, considers the elements of the organization, resources, and faculty development and training, as factors that drive the process and activities of developing and teaching online courses, as well as, influence the experience of developing and teaching online courses. In order to understand these factors in light of the current findings, various discussions are provided to shed light about their meaning and potential value relating to organization, resources, faculty development and training, and the importance of roles in online learning.

Composite Textural-Structural Description Themes Discussion

Themes described in chapter five were generated from a phenomenological analysis of participants' narrative data. This took place by analyzing and closely reading

the transcripts for significant statements, the invariant horizontalization process, and then searching for recurring themes with an eye towards identifying commonalities in the participants' experiences. The concepts of fear, transformation, and support emerged from an understanding and interpretation of the participants' voices and their experiences based on phenomenology analysis.

Dewey's theory of experience and the Unified Theory of Acceptance and Use of Technology (UTAUT) were used to create a conceptual framework to describe the participants' experiences, the elements that influenced that experience, and the outcomes of that experience, due to the fact that this conceptual framework precisely describes the interactions, feelings, and lived experience of the participants involved in the phenomenon. The emergent data spoke directly to this framework. It became clear that developing and teaching online courses at this particular school of public health was complicated, not by choice, but due to the current realities of the social, technical, and political system in place to support their online learning endeavors.

Further, when exploring and analyzing the outcomes of technology adoption, experience and in this case online learning participation of public health faculty developing and teaching online courses, Venkatesh, Morris, Davis, and Davis (2003), Cron, Glocum, VandeWalle, and Fu, (2005), and de Vries, Midden, and Bouwhuis (2003) suggest that the UTAUT model provides a platform as to how attitudes towards technology, self efficacy, and computer anxiety play an important role in shaping one's use and experience with technology and whether the experience is positive or negative based on failing or succeeding in one's efforts to participate in a particular innovation.

These authors suggest that for some, failing at one's efforts results in negative emotions and future efforts relating to innovation. In reference to technological innovation which includes online learning, these authors suggest that an individual's failure to successfully learn a technology or participate in an innovation may induce a negative cycle of non use and emotions. This negative cycle may affect self confidence and trust in technology and may have implications for self efficacy when using technology. As the current study seeks to explore the experience of public health faculty who develop and teach online courses, these constructs play an important role in analyzing the elements that shape the faculty's experience developing and teaching online courses.

Rhetoric of Fear

Dewey (1938) teaches that experience consists of two principles. The first is continuity and the second is interaction. According to Dewey (1938) continuity refers to past events influencing the present. Interaction refers to present experiences arising from interactions between past experiences and present situations. Together, one's experience of an event, observation, or moment is unique and is profoundly influenced by one's experience of past moments. This experience creates an interaction between an external environment, whether objects, people, or surroundings.

The individual's internal state, including knowledge, skills, and attitudes are shaped by prior experiences. Taken together, the principles of continuity and interaction means that what individuals may observe or learn from a given experience is influenced both by their prior experiences, by the physical and social settings the experiences took place in as well as the physical and social setting of the current experience. The current

experience of public health faculty developing and teaching online courses has been shaped and influenced by their previous experiences with teaching, learning, organizational support, and technology, as well as their past interactions with academia, institutional organizational practices, past faculty who influence their thinking, beliefs and assumptions regarding online learning and technology. Based on past interactions with faculty and organizational structures that help shape their thinking about teaching and learning in general and online learning, participants in this current study found themselves in a condition where there was a lack of experience with online learning. This lack of experience with online learning, brought on by a lack of preparation and training, as well as being influenced by prior interactions with faculty from previous institutions to believe and subscribe to myths and assumptions regarding online learning, led faculty in this study into a state of apprehension to develop and teach online courses. This caused the process and activities of developing and teaching online courses to be a painful and daunting experience.

This fear is a major theme generated from the participants' narrative data. This element of fear is what UTAUT refers to as anxiety, which refers to the anxious or emotional reaction associated with the use of a particular technology, in this case online learning. This anxiety, according to UTAUT influences attitudes toward technology, which is defined by the degree to which an individual believes he or she should use a particular technology.

Based on Dewey's theory of experience, the past in the form of interacting with faculty, policy, and organizational practices and the influence those interactions

produced, created past experiences that influence the current experience and practices of developing and teaching online courses at this particular school of public health.

Participants felt inadequately prepared before they undertook the activities of developing and teaching online courses, due to a lack of awareness and experience with current technology, a course management system, online learning faculty development and training, or support systems for online learning. This indirectly influenced the participants' self efficacy, which UTAUT defines as to the degree to which an individuals' judges his or her ability to use a particular technology to accomplish a particular job or task.

Given the understanding that these participants had of online learning, subscribed to myths and assumptions concerning online learning, brought on by previous faculty, made it difficult to live a positive or successful experience developing and teaching online courses. This in turn presented an experience where participants would develop negative expectations in a combination of excitement, dread, and fear regarding developing and teaching online courses. These experiences would ultimately clash with the practices and activities of developing and teaching online courses, resulting in apprehension to develop and teach online courses.

Not only did fear or apprehension reveal itself in developing and teaching online courses, fear and apprehension revealed itself in how participants in the current study approached online learning, their interactions with students, and their interaction with administration. Previous belief in myths and assumptions about online learning brought on by their past interactions with previous institutions, faculty, and their own lack of

awareness of online learning presented an environment where participants had to accept and expect the unknown. This environment of the unknown was experienced through their new roles as online instructors, how they as online instructors were to interact and navigate in an abstract non tangible environment, where students were invisible, and ultimately how to conceptualize teaching and learning in a foreign environment.

Dealing with the unknown added to a sense of fear with online learning.

When it came to interacting with students in the online environment, participants again showed fear and apprehension in terms of how they would build rapport and relationships with students and ultimately bring into question their physical safety, as one described a situation of being “killed” because he did not know the faces or personalities of the students whom he had taught online. Given these circumstances and previous experiences influencing current experiences, these participants would have to come to grips with their teaching practices, their role, and individual beliefs concerning online learning.

In summary, participants experienced fear as a byproduct of their lack of experience and being ill-prepared to develop and teach online courses. This fear manifested itself in how participants felt in regards to support, training, technology, and safety. In brief, participants experienced fear as being part of their current experience navigating through the process and activities of developing and teaching online courses, with the influence of their past experiences and past interactions with faculty, organizational practices, and their own beliefs while trying to come to grips with online learning at this current institution.

These experiences of fear, apprehension, pain, and daunt are well documented in the literature and are found to be consistent with the Unified Theory of Acceptance and Use of Technology model (UTAUT) as discussed by Venkatesh, Morris, Davis & Davis, (2003), Cron, Glocum, VandeWalle, and Fu, (2005), and de Vries, Midden, and Bouwhuis (2003). These authors suggest that the UTAUT model provides a platform as to how attitudes towards technology, self efficacy, and computer anxiety play an important role in shaping one's use and experience with technology and whether the experience is positive or negative based on failing or succeeding in one's efforts to participate in a particular innovation. These findings are also consistent with the experiences found in works of Conceicao (2006), Grosse (2004) Franklin and Blankson (2001), Kyei-Blankson (2009), Lorenzetti (2004), Nelson and Thompson (2005), Paulus, Myers, Mixer, Wyatt, Lee and Lee (2010), and Sugar, Martindale, and Crawley (2007).

This study suggests that attitudes towards technology, self efficacy, and computer anxiety played an important role in shaping one's use and experience of the public health faculty who participate in the activities of developing and teaching online courses. Understanding that past experiences influence the present, present attitudes toward online learning and the emotional outcomes expressed, are deeply connected and influenced by previous and current experiences, which in turn produce attitudes that influence participants' self efficacy related to developing and teaching online courses and their levels of anxiety or fear related to the task of developing and teaching online courses.

Transformation

A second theme that emerged from the voices of the participants from their experience was transformation. Participants of the current study experienced transformation in the process and activities of developing and teaching online courses as vital to their experiences developing and teaching online courses. Participants described their transformation brought on by the process and activities developing and teaching online courses in their thinking and knowledge regarding online learning, their knowledge how to teach online and their role as an online instructor. Again looking through the lens of Dewey (1938) continuity and interaction, this transformation in thinking created a new experience due to the fact that there was a shift in previous assumptive thinking regarding learning which was based on negative depictions, biased opinions, and myths of previous faculty that current participants had interactions with.

As participants navigated through the process and activities of developing and teaching online courses, their thinking concerning online learning and their knowledge associated with how to develop and teach online courses changed as a result of their new experience with online learning (i.e. developing and teaching online courses). This transformation gave them the ability to develop and teach online courses. With this shift in thinking, came a shift in attitudes and beliefs concerning online learning. Where faculty had negative assumptive views of online learning, the process and activities of developing and teaching online courses allowed the current participants the opportunity to experience the reality first hand, of what online learning entailed. This was instrumental in helping the participants see, feel, and experience online learning at its

best. In addition to a transformation in thinking and knowledge regarding online learning, participants experienced a transformation in teaching practices as well. This transformation in teaching practices was as a result of interacting with online learning in the current environment and a shift from traditional didactic methods to active learning methods that were suitable for online learning. Not only did the transformation change their online teaching practices, this transformation presented a new experience of teaching, which was then transferred to the participants' face-to-face teaching environment.

An additional component to the transformation theme was the transformation of the role of the faculty. When participants experienced a transformation of their role as faculty, there was a shift and an evolution in how faculty saw themselves and their role as faculty, while in the process and activity of developing and teaching online courses. In depicting this transformation of their role, participants described a shift from the "sage on the stage" to that of a "facilitator."

In brief, the participants experienced a transformation in their role as faculty in developing and teaching online courses. Indicative of this new role were course designer, course developer, course manager, knowledge facilitator, and assessor. Transformation also took place in participants' thinking, allowing them to release their belief in myths and assumptions associated with online learning, as well as their teaching practices to allow new roles to emerge.

Although UTAUT does not speak specifically to transformation, it provides us with a set of analytical tools to learn and understand how transformation may occur

within this setting. Again, Venkatesh, Morris, Davis and Davis, (2003), Cron, Glocum, VandeWalle, and Fu (2005), and de Vries, Midden, and Bouwhuis (2003) suggest that the UTAUT provides a platform as to how attitudes towards technology, self efficacy, and computer anxiety play an important role in shaping one's use and experience with technology and whether the experience is positive or negative based on failing or succeeding in one's efforts to participate in a particular innovation. Looking at the concept of success and failure with learning the necessary tools to be successful at developing and teaching online courses, the fact that the participants were able to develop and teach their online courses, helped to build their self efficacy and reduce their computer anxiety and the negative feelings and attitudes towards their participation in online learning.

This transformation in thinking, teaching ability, and role, made it possible for participants to experience a positive interaction with online learning. This is well documented in the literature and are consistent with the Unified Theory of Acceptance and Use of Technology (UTAUT) model and the findings of Appana (2008), Conceicao (2006), Fish and Gill (2009), Grosse (2004) Kyei-Blankson (2009), Li and Atkins (2005), and Paulus, Myers, Mixer, Wyatt, Lee and Lee (2010), who states that faculty must fundamentally change their thinking, views, perceptions, attitudes, and beliefs about online learning in order to be successful in this mode of teaching and learning

Support

A third theme that emerged from the voices of the participants experience was support. Support was experience through instructional and organizational support,

faculty development and training, as well as, through quality resources. UTAUT defines this as facilitating conditions, the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system (Venkatesh, Morris, Davis, & Davis, 2003). In this case, support is for public health faculty participation in online learning, specifically developing and teaching online courses. This construct is influenced by experience which in turn influences one's participation in online learning, specifically developing and teaching online course.

Using Dewey (1938) as a lens, past experiences and interactions with various entities influenced how participants saw and experienced support in this current study. Each participant described their experience based on their past experiences and interactions along with their current experiences developing and teaching online courses. Their views on support in the process and activities of developing and teaching online courses were described in a negative manner. While some participants had a positive outlook and described support as helpful, important, critical, crucial, and needed, others described it simply as poor and nonexistent. Based on their current interaction with the institution and how faculty saw the institution as being a barrier and or presenting challenges to the process and activities of developing and teaching online course, their experience with support became reflective of the negative interaction and experiences with organizational support. These barriers and or challenges included ill defined policies as to who were screened and selected to develop and teach online courses, procedures on how to find support and or technical assistance, lack of incentives or a policy for incentives such as release time to develop the online courses, inadequate

resources to improve skills, or no real support office to handle instructional design coaching for online learning, or personnel or hardware and software.

Overwhelmingly, participants felt that in order for them to develop and teach online courses, there had to be policies that would help facilitate positive work interactions that supported or assisted in their work developing and teaching online courses instead of being roadblocks and barriers. It became clear that participants would more likely develop and teach online courses if they had peer support, incentives, mentorship from other faculty who were skilled in developing and teaching online courses, and having access to staff personnel that could assist in the development of online courses. Additionally, current software, peripherals, instructional technology and design support and support staff, funding, books, articles, and websites, were important to the experience of the participants developing and teaching online courses. Again this relates to the facilitating conditions construct of UTAUT, which plays a significant role in the experience of public health faculty developing and teaching online courses.

Lastly, participants concluded that faculty development and training was necessary to the process and activity of developing and teaching online courses. Faculty development and training helped prepare participants for the process and experience of developing and teaching online courses. It was through faculty development and training and through active course design and development, where participants would challenge their assumptions regarding myths and assumptions of online learning, learn new skills and abilities to develop and teach online courses, and transition from face-to-face teachers into online instructors. As explained previously, this was not an easy

process for participants in the current study. Whether faculty development and training was experienced in a formal or informal fashion, faculty development and training was seen as an essential element to the process, activity, and the experience of developing and teaching online courses. Additionally, it was through faculty training and development where faculty saw meaning and value in their work as online instructors and the potential of what could be accomplished in their face-to-face teaching. It is important to note that faculty development and training is well documented and is consistent with the works of Conceicao, (2006), Kyei-Blankson (2009), Macy (2007), McGuire (2005), and Shea, Pickett, and Li, (2005) and Paulus, Myers, Mixer, Wyatt, Lee and Lee (2010), who each discuss that in order for faculty to be successful in online instruction, quality faculty development and training must be provided in order to equip the faculty with the skills and abilities to participate in online learning.

Organizational Dynamics and Institutional Influence

The current study suggests that the experience of public health faculty in developing and teaching online courses was influenced by three elements. These elements include the individual perspective, which can be described as the skills and knowledge needed to develop and teach online courses; a technology perspective, which can be described as the availability and capacity of technology tools to compliment and support faculty developing and teaching of online courses; lastly, an organizational perspective, which can be described as a social, technical and political system that influences faculty ability to develop and teach online courses. These three elements corresponds to the elements that influenced their individual perspective including the

faculty's knowledge, skills, abilities, attitudes, and beliefs, their interaction with technology tools to support the activity of developing and teaching online courses, and a social, technical, and political systems in place to support online course participation.

The current study suggests that the organizational perspectives contribute overwhelmingly to an experience of faculty developing and teaching online courses, whether the experience would be positive or negative, or successful or unsuccessful. The emergent data from the participants' voices suggests an incongruence of the organization support system and faculty participation in online learning. Consistent with these findings is the work of Covington, Petherbridge, and Warren (2005), who revealed that the influence of the organizational infrastructure is a contributing factor to faculty's willingness and ability to participate in online learning. These authors also contend that a variety of organizational support strategies are required, if faculty are to be successful in developing and teaching online courses. If organizational support is not provided, faculty will have an unsuccessful experience in online learning that will in turn produce a negative experience influencing future decisions to participate in other technology or online learning initiatives. This is consistent with the Unified Theory of Acceptance and Use of Technology model (UTAUT) as discussed by Venkatesh, Morris, Davis & Davis, (2003), Cron, Glocum, VandeWalle, and Fu, (2005), and de Vries, Midden, and Bouwhuis (2003).

From the participants' voices, the study suggests several contributing elements of faculty and organizational incongruence including:

1. lack of connection to the mission, vision, goals, or policy of the school at large;
2. lack of support system for the activities associated with developing and teaching online courses including faculty development and training or instructional design support;
3. lack of reward or incentive system;
4. lack of school-wide leadership; and
5. organizational culture not reflective or accepting to developing and teaching online courses.

Consistent with this, the current study suggests that when there was a lack of organization continuity to the mission, vision, and goals of the school, participants saw a disconnect from the system of rewards, incentives, and reality in support for developing and teaching online course. This is consistent with the work of Simpson (2010), who stress that the lack of organization fit and its conflict with faculty is a major deterrent of faculty participating in online learning. This is also consistent with the UTAUT model. In other words, the current study suggests that due to the lack of clarity in focus for developing and teaching online courses at an organizational level, there was a lack of clarity in the support system to aid the process and activities of developing and teaching online courses. Supporting this contention is Simpson (2010), whose findings demonstrate that, at the organizational level, administration should invest in efforts to determine the state and culture of the organization concerning online learning and how online learning best fit and serve the needs of its intended population. Related to this

assertion is the work of Conceicao, (2006) and Kyei-Blankson (2009), who place importance on institutional organizational support and Simpson (2010) who place importance on administration determining the organizational fit of online learning. Simpson (2010) states that these efforts should involve a close study of the faculty attitudes, perceptions, experiences, knowledge, and skills related to developing and teaching online courses and policies that govern such activity. These individual characteristics, as suggested by the current study, should be analyzed in relation to the organizational capacity and fit to support the activities of developing and teaching online courses including devising a support system to provide instructional design assistance, a system of rewards and incentives, and activities that facilitate a healthy organizational culture where public health faculty can develop and teach online courses without hindrances. The work of Simpson (2010) supports this contention.

For the current study, participants suggests that administration should explore ways in which organizational culture and policy align with activities that initiate faculty developing and teaching online courses, in addition to a system that sustains such activity. These activities, based on the study should be assessed in relation to the mission, vision, and goal of the school and determine whether the activities of developing and teaching online courses support and are consistent with the mission, vision, and goals of the school. Again this is consistent with Conceicao (2006), Kyei-Blankson (2009), and Simpson (2010) who postulates that organizational culture and policy should be aligned to the activities faculty engage in order to participate in online learning.

According to emergent data of the current study, the study suggests that administration at this particular school of public health should take steps to assess the organizational capacity to support the development and teaching of online courses. Public health faculty in this study found the idea of assessing the online readiness of the faculty and the organization to be useful in creating an alignment between the realities of developing and teaching online courses with perceptions of administration for developing and teaching online courses. The online readiness, according to the study would determine if the organization had the proper equipment, support infrastructure, resources, human resource staff personnel, and structure to support the activities of developing and teaching online courses. In addition, participants revealed through their narratives that it was important to assess the organizational climate, culture, and infrastructure before undertaking or initiating an online learning program. However, this did not take place at this particular school of public health and thus barriers ensued, making the process of developing and teaching online courses a challenge, thus influencing the experience of the participant at this school of public health.

In addition, the current study findings purport that administration at this particular school should articulate a vision concerning the objectives and standards for developing and teaching online courses and how these standards and objectives were to be aligned with the mission, goals, and policies of the organization. Again this is consistent with Simpson (2010). According to Simpson (2010) this would provide continuity between faculty, policy and organizational fit for online learning.

The Need and Availability of Quality Resources

The current study suggests that public health faculty experienced resources as either having value or little to no value. Consistent with this, the study revealed that electronic resource materials such as websites and electronic templates were of little to no value in the process or activities of developing and teaching online courses. Further, print resources such as books and journal articles were also found to be of little to no value. However, to the contrary of print and electronic resources, human resources personnel in the form of an instructional designer, and a teaching assistant were seen as crucial to the process and experience of developing and teaching online courses. In other words, the study revealed that the instructional designer and the teaching assistant played an integral role in the process of how public health faculty developed and taught online courses, as well as how the participants experience the activity and process of developing and teaching online courses.

In order for faculty to be successful in developing and teaching online courses and have a successful experience, faculty should be provided an instructional designer to help guide faculty as they develop their online course. Additionally, a teaching assistant should be provided to help facilitate online teaching functions once the course has been implemented. Lastly, the study suggests that relevant and current technology tools, best practices, and strategies are valuable and should be provided when appropriate. This is consistent with the work of Sugar, Martindale, and Crawley, (2007), Conrad and Pedro, 2009; and Convington, Petherbridge, and Warren, 2005, who stressed that working with

instructional design personnel, enhances the faculty's ability to design effective online courses.

The Essentials of Faculty Development and Training

The current study suggests that the experience of public health faculty in developing and teaching online courses was influenced by faculty development and training in a dichotomous fashion. While the current study suggests that faculty development and training is critical to the process and activity of developing and teaching online courses, the study further suggests that the value of the delivery method used to provide faculty development and training is also important. Although the work of McGuire (2005), Conceicao, (2006), Kyei-Blankson (2009), Macy (2007), and Shea, Pickett, and Li, (2005) state that faculty development and training is critical to faculty developing and teaching online courses. Their studies do not drill deeper into how the training was to be provided in order for faculty to engage in online learning. This current study suggests a deeper insight into the delivery mechanism of faculty development and training. This current study suggests that faculty development and training that takes place in a traditional group workshop format is less desirable and effective as to the informal one-on-one instructional coaching sessions. Further, this study suggests a higher value placed on informal one-on-one instructional coaching to that of the traditional lecture style training.

According to the study, if faculty are presented with one-on-one informal instructional coaching opportunities to learn the online environment, develop online courses with various technology tools, the functions of the course management system,

and experience how to teach within the online environment, faculty will have a favorable and positive experience developing and teaching online courses. Informal one-on-one instructional coaching allowed faculty to work one-on-one with an instructional designer. These sessions were described as more personal and interactive, allowing faculty to engage the process of online teaching with more depth and sufficiency. Additional one-on-one instructional coaching provided one-on-one instant support, when faculty had difficulties in the online course development process. This was found to be consistent with the works of Conceicao, (2006) and Kyei-Blankson (2009), Macy, (2007), McGuire (2005), Shea, Pickett, and Li (2005). In addition, participants in the current study also reveal that in order for faculty development and training to be effective and for faculty to be successful in developing and teaching online, faculty should be introduced to the faculty development and training for developing and teaching online courses early in the activity process of developing and teaching online courses. This would help dispel myths and misconceptions of online learning and prepare faculty for online course development. This is consistent with Conceicao (2006) and Kyei-Blankson (2009), who state that training and faculty development is crucial to faculty developing and teaching online courses and that training should take place early in the process in order to be effective. This is consistent with Li and Atkins (2005) and Seiber (2005) who state that training in online learning helps to dispel myths and misconceptions associated with online learning by allowing faculty to experience firsthand the course development and online teaching process. Paulus, Myers, Mixer, Wyatt, Lee and Lee (2010) confirms that while faculty are in the course development

process, faculty development and training will help faculty acquire the skills and intellectual capacity required to develop and teach online courses, thereby allowing them the opportunity to have a successful experience developing and teaching online courses.

Further, the current study suggests that in order to successfully develop and teach online courses, administration would have to facilitate an environment where faculty could familiarize themselves with technology tools, the course management system, potential uses, and functions of the technology. This step is consistent with Appana (2008) and Nelson and Thompson (2005) who suggests that training would involve not only technology tools to package and deliver content over the world wide web via a course management system, but also instructional training on how to teach within the course management system and with the technology tools.

The current study demonstrates that faculty development and training is crucial to the process and activities of faculty developing and teaching online courses; however, the delivery methods and types of training had influence on the experience of public health faculty developing and teaching online courses. Therefore, this study suggests a relationship between the type, the frequency, and quality of faculty development and training to the experience one has developing and teaching online courses. This study also suggests that if one has an increased frequency of access and participation in faculty development and training before the start of and during the activities associated with developing and teaching online courses, their experiences were likely be more successful than a faculty who has had a limited frequency in faculty training and development associated with online learning. These findings are consistent with the work of Reeves

and Reeves (2007) who state that successful online instructors participate in faculty development and training on a regular basis.

Understanding the Influence of Roles in Online Instruction

Additionally, this current study suggests that when faculty have additional organizational roles, such as administrator, division director, associate dean, or regional dean, these roles complicated the process and activities of developing online courses and are found to influence the experience of developing and teach online courses. In fact, participants who had dual roles saw teaching online as a convenient benefit. This is consistent with the results of Liu, et al. (2007) who suggests that extra roles and administrative responsibilities have little effect on the facilitation of learning within an online course, but presents itself as a barrier in the process of developing online courses. Such roles have to be mediated in order for faculty to find balance between the two. Therefore, the current study suggests that public health faculty who have dual roles, experience developing online courses negatively, while the online teaching aspect was positive. In other words, this current study suggests a relationship between time, additional roles, and the experience of faculty who develop and teach online courses; the more roles and time constraints one has to deal with in order to develop and teach online, the more negative the experience, as opposed to those who have less roles and more time, the more positive the experience. The current study suggests that faculty development and training on a frequent intermitted frequency is important, valuable and has influence on the lived experience of the public health faculty involved in developing and teaching online courses.

Framework of Public Health Online Teaching Experience

This study looks at the experience of public health faculty who develop and teach online courses through an integrated conceptual framework of UTAUT, the Unified Theory of Acceptance and Use of Technology, as discussed by Venkatesh, Morris, Davis, and Davis (2003) and the Theory of Experience as discussed by Dewey (1938).

Dewey (1938) through the principles of continuity and interaction lets us know that what individuals may observe or learn from a given experience is influenced both by their prior experiences and by the physical and social settings of those experiences and of the current experience. Unified Theory of Acceptance and Use of Technology, as discussed by Venkatesh, Morris, Davis, and Davis (2003) provides us with a set of analytical tools to explore the elements that influence one's participation in technology adoption, and in this case online learning. Using these theories as a foundation, along with the participants' narrative data, yields an emerging integrated framework that can be used to explore the experience of public health faculty who develop and teach online courses and the elements involved that play a crucial role in shaping the experience of public health faculty in developing and teaching online courses. See figure on page 330 for a visual representation.

The most salient essential structures that emerged from the participants' narrative data can be centered around and grouped into three general elements. These elements include:

- Individual perspective;
- Technological perspective; and the

- Organizational perspective.

This review suggests that elements relating to participants' experience in developing and teaching online courses could be framed around the above three key elements: individual perspective, technology perspective and organizational perspective. According to the data that emerged from participants' narratives, the individual perspective can be described as the skills and knowledge needed to develop and teach online courses. The technology perspective can be described as the availability and capacity of a technology tools including hardware, software, and peripheral used to compliment and support the development and teaching of online courses. Lastly, the organizational perspective can be described as a social, political, and technical infrastructure that influences the faculty's ability to develop and teach online courses. The three perspectives were identified from the data and were found to be direct influences on the experience of public health faculty who develop and teach online courses.

The proposed conceptual framework provides a set of analytical tools to explore the elements that influence and shape the experience of participants who develop and teach online courses. This discussion begins with the component and influence of previous experience that form the previous individual perspective. Figure 1 illustrates the role of experience in faculty online learning participation. As Dewey (1938) points out our current experiences of events are shaped and motivated by past experiences. The characteristics under the previous individual perspective highlight the influence of previous events that shape perceptions of colleagues, assumptions, beliefs, perceptions

of teaching, and values and perceptions of academia. The previous individual perspective is also comprised of previous interactions that highlight skills, knowledge, and abilities needed to develop and teach courses in a higher education academic setting.

The elements under the previous technology perspective relates to previous assumptions, beliefs, and values of technology. In addition, the previous technology perspectives comprises of various interactions with technology tools, course management systems, and a technology infrastructure needed to support teaching in previous academic environments. This element also includes the experience of the ease of use related to those technology tools and systems.

The elements for the previous organizational perspective highlight previous events that shape assumptions, beliefs, and values of a social and political system in place to support teaching. This includes organizational policy, support, and roles as faculty. This also includes perceptions of previous experiences in organizational support, faculty development and training, support for course development, time allowances, incentives and rewarding structures. The previous organizational perspective also includes previous experience with previous faculty and organizational culture toward teaching, institutional leadership, and institutional strategy.

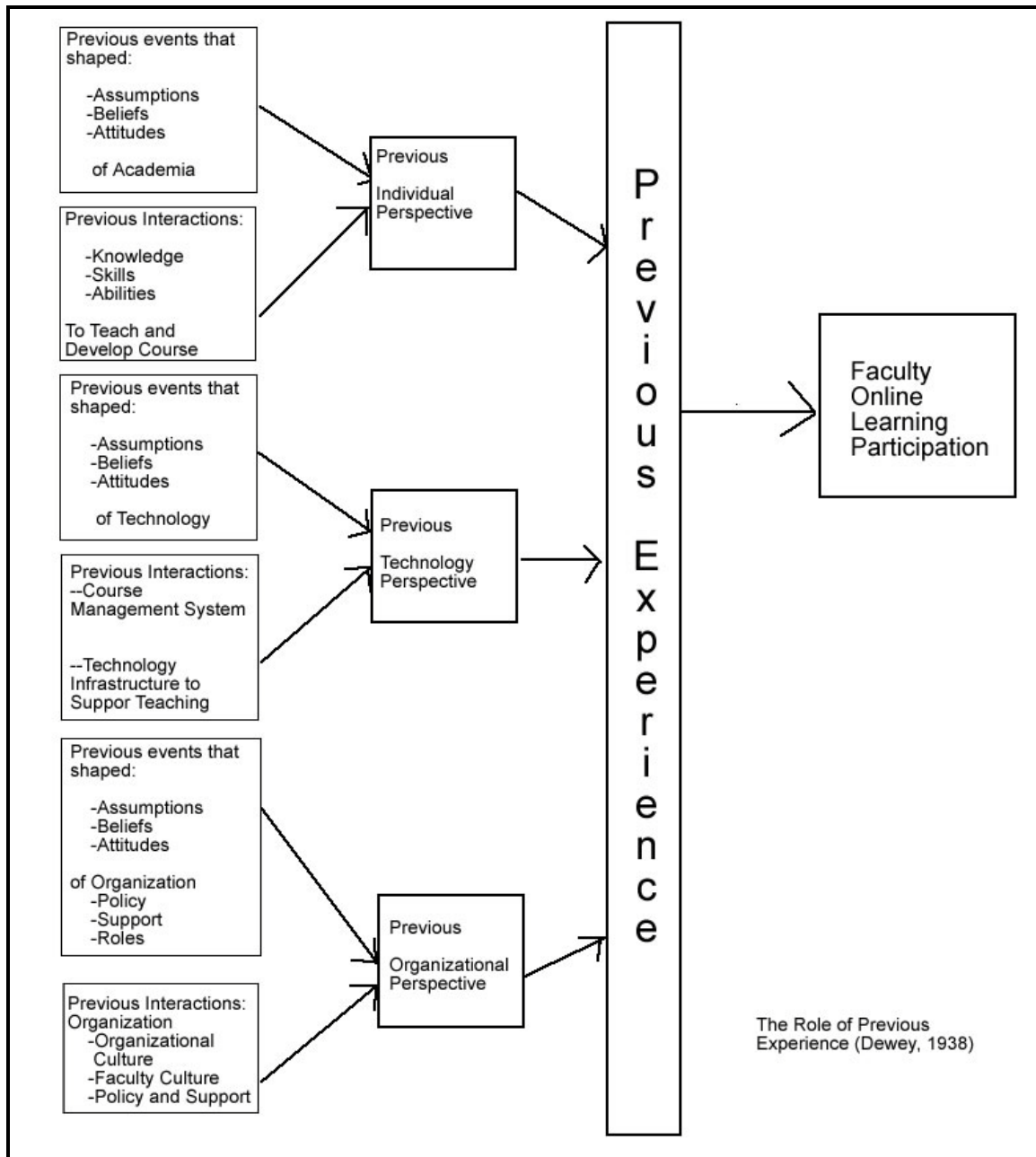


Figure 1: Role of Experience in Developing and Teaching Online Courses

The three previous perspectives, including the previous individual perspective, the previous technology perspective, and the previous organizational perspective, form the previous experience perspective that influences current experiences and practices of online learning. Dewey (1938) points out that previous experience inevitably effect the current experience. In others words, past events influence the present. These past events in turn, effect future experiences. Participants come to the current experience of developing and teaching online courses with previous experiences and prior knowledge, assumptions, values, and belief of teaching, technology, and interactions with various components of an academic institution. Working in concert, these three elements inform and influence current practices of online learning participation.

The second section of the conceptual framework details how participants bring prior knowledge and experiences to new situations. The new situations in question are the experiences of developing and teaching online courses. Using UTAUT as a conceptual foundation to explore current experiences and the elements that drive participation in online learning, three key determinants played a crucial role as outlined from the study. Figure 2 illustrates UTAUT key determinants influencing the faculty experience developing and teaching online courses. These three key determinants include performance expectancy, effort expectancy, and facilitating conditions. Performance expectancy is the degree to which an individual believes that using a particular technology or system will help him or her to attain gains in job performance. This is characterized by beliefs, assumptions, perspectives, and values of online learning.

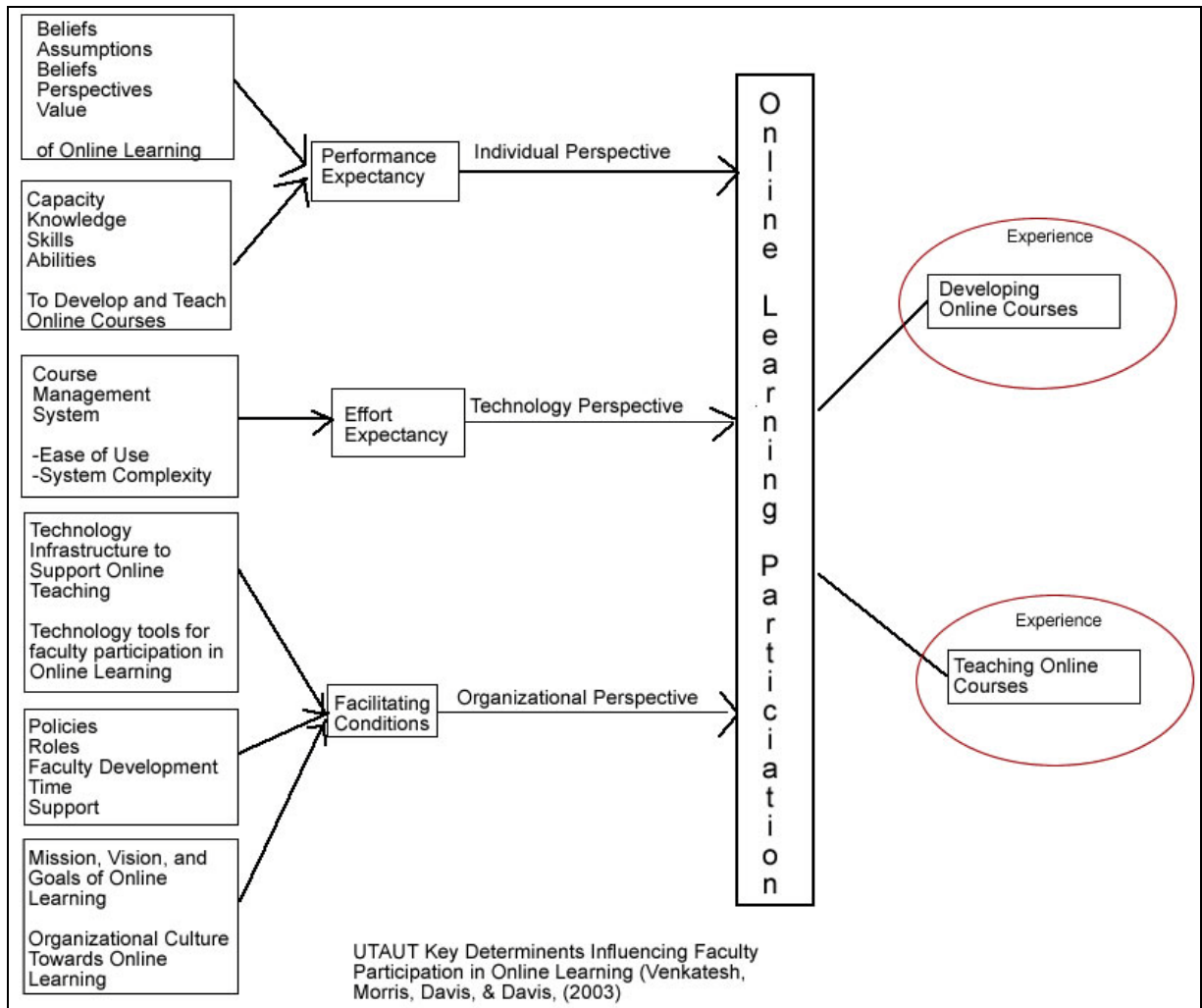


Figure 2: UTAUT Key Determinants Influencing Faculty Participation in Online

Teaching

Effort expectancy relates to the degree of ease associated with the use of a technology or system is relates to the course management system and technology software and hardware tools and their characteristics, including limitations on system and product functionalities, flexibility of design tools, usefulness, user friendliness, system complexity and its ease of use. This component forms the technology perspectives.

The elements that form facilitating conditions refer to the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system. This highlights the availability and capacity of a technology infrastructure that supports the development and teaching of online courses, policy, organizational support, faculty development and training, support for content development, time allowances, incentives and rewards, technology software training and helpdesk and instructional design support. The facilitating conditions also includes faculty and organizational culture toward developing and teaching online courses, organizational strategy for developing and teaching online courses, institutional leadership and institutional strategy of online learning and as well as the role of faculty. This component forms the organizational perspective.

Performance expectancy, effort expectancy and facilitating conditions have direct influence on faculty participation in online learning and their experience developing and teaching online courses. However, as determined from this current study, these three key determinants are moderated by computer/technology anxiety, self efficacy, attitudes

toward technology, experience, and voluntariness. Figure 3 illustrates UTAUT secondary determinants and moderators that influence online learning participation.

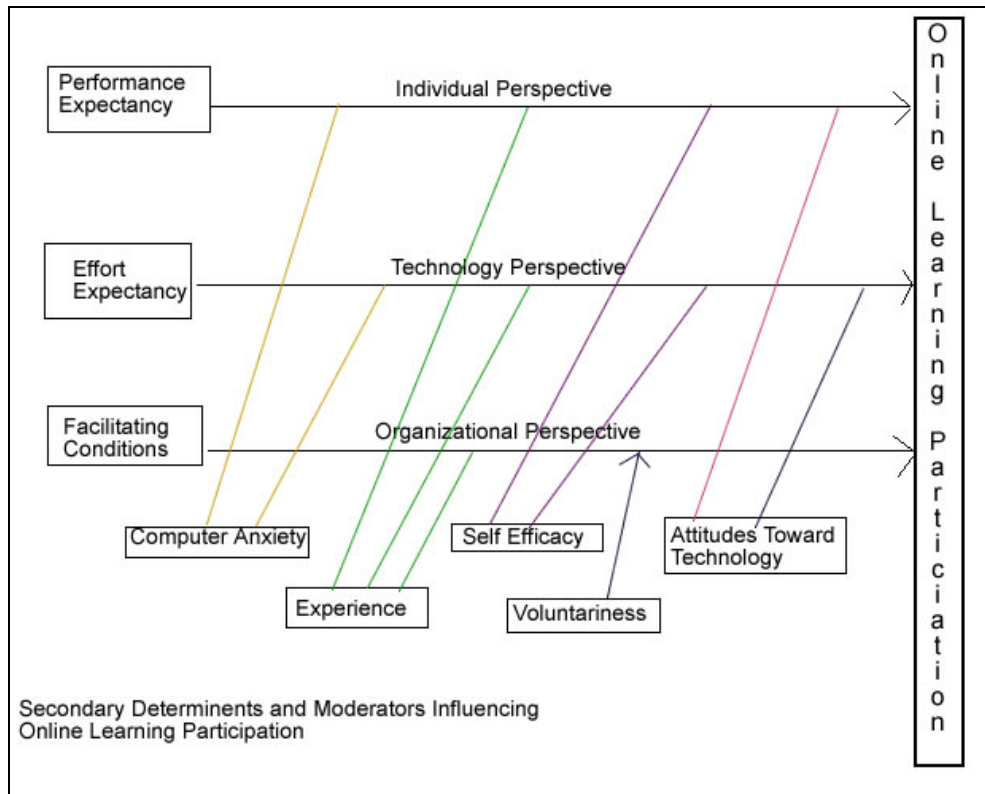


Figure 3: UTAUT Secondary Determinants and Moderators That Influence Online Teaching Participation

Computer or technology anxiety refers to the anxious or emotional reaction associated with the use of a particular technology. Self efficacy refers to which an individual's judges his or her ability to use a particular technology to accomplish a

particular job or task. Attitudes toward using technology refer to the degree to which an individual believes he or she should use a particular technology. Voluntariness refers to one's participation in using technology as being forced or being willing to try a technology or system due to one's own interests. Lastly experience represents the construct of prior interaction and knowledge gained from previous interactions with academia, teaching, and related technologies similar to the technology under adoption and previous experience with the current technology under adoption.

These moderators influenced the individual, technical, and organizational perspectives that led to online learning participation, whether that participation is to develop online courses, teach online courses or a combination of both. Based on the conceptual framework that has inductively emerged from the study, the three perspectives, the individual, the technology, and the organizational perspective, informed by performance expectancy, effort expectancy, and facilitating conditions moderated by previous experiences, current experiences, anxiety, self efficacy, attitudes toward technology, and voluntariness led and influenced participation in online learning.

These perspectives represent how data generated from the participants can be grouped, studied, and described as to the elements that influence the participants experience in online learning, specifically developing and teaching online courses. Based on this premise, the study identified two facets of the online learning experience: content development and content delivery. Figure 4 illustrates the full conceptual framework detailing the experience and UTAUT elements that influence the experience of public health faculty who develop and teach online courses. The study highlights the

fact that institutions embracing online learning will need to deal with multiple elements that inform the individual, technical, and organizational perspective and the key determining factors that drive online learning participation. The results based on this current study and from the conceptual framework indicates a relationship between the features identified in the framework are likely to influence the faculty in developing and teaching online courses.

At the individual level, the study reveals that the degree of knowledge and skills in online content design and delivery would influence faculty participation in online learning, their experience in developing and teaching online courses, and the decisions to embrace new forms of instructional practices. This result highlights the need for faculty development, training and support during the process. The study indicates that failure to provide support, resources, faculty development and training will result in faculty apprehension, thus resulting in a negative unsuccessful experience.

The current study also identified that individual perceptions towards developing and teaching online courses are influenced by prior beliefs and assumptions and its subsequent transformation is a significant component to the process of developing and teaching online courses. The study leads to the conclusion that influence of colleagues, teaching assistants, and instructional design support staff are a key component, but not all pervasive.

Participants believed that the course management system relevancy towards their instructional delivery was a key factor that influenced them to develop and teach online courses. At the same time, it could be noted that a positive faculty culture towards online

learning developed while participants were in the process of developing and teaching online courses. This was one of the key influencing elements in their experience.

At the technology perspective level, technology tools including hardware, software, peripherals, and the attributes of the course management system including system flexibility, functionality, ease of use, and tools to design and deliver online courses were important elements that influenced the experience of public health faculty developing and teaching online courses at this school of public health.

In terms of the organization perspective, faculty facilitation of skill and knowledge development in content design and delivery and time for developing online courses were key contributory elements that influence the experience of faculty who develop and taught online courses at this particular school of public health. In addition to developing and teaching online courses and the specific skills and knowledge needed to accomplish these activities, sufficient training in educational technology tools, instructional design, facilitating efficient instructional strategies, and helpdesk support services influenced the experience of faculty developing and teaching online courses at this particular school of public health. It was also revealed that the organizational perspective would need to facilitate a social, technical, and political infrastructure for faculty that supports online learning. This included the need for institutions to invest in a strategic plan for developing and teaching online courses across this particular school of public health.

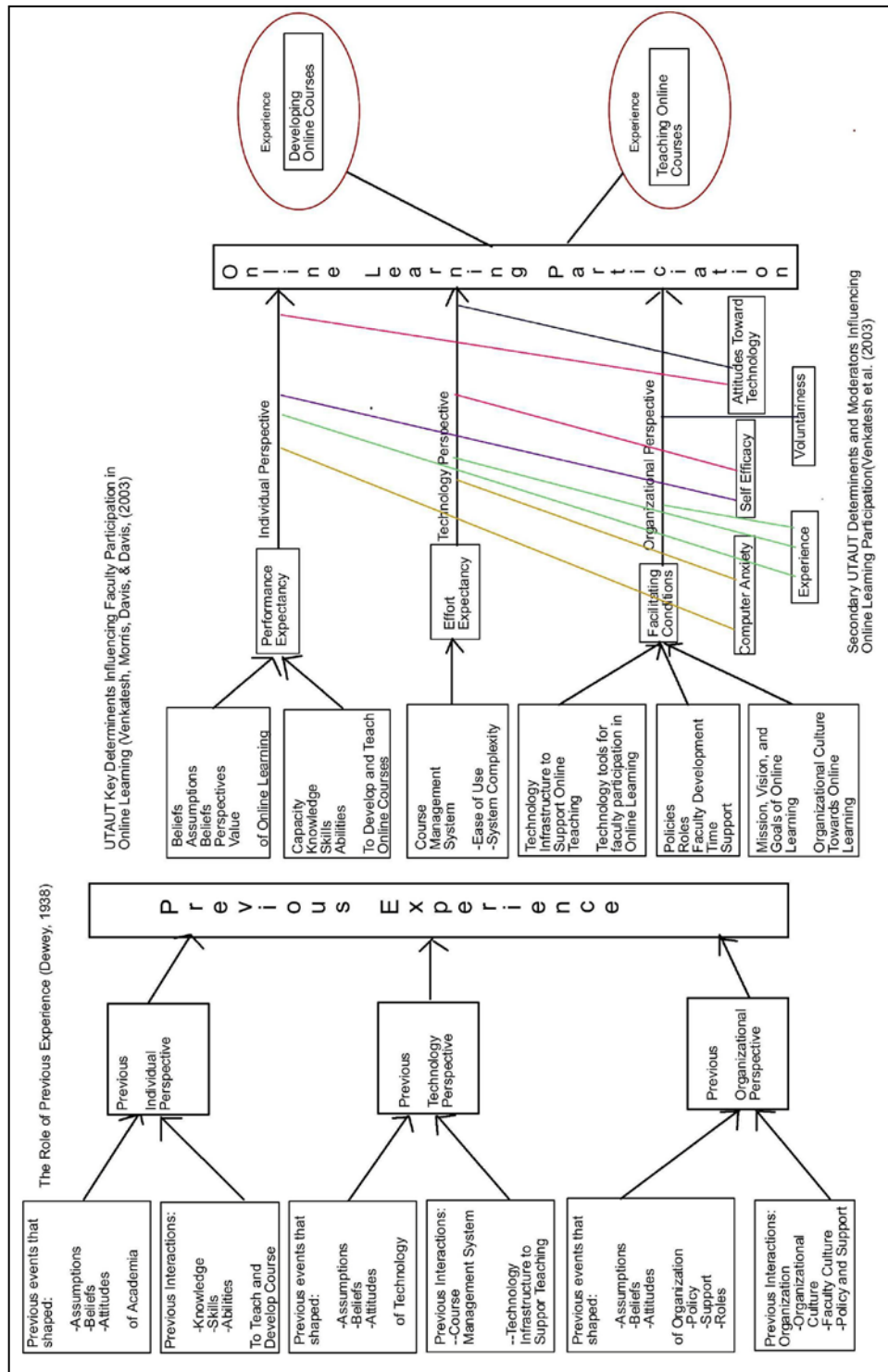


Figure 4: Framework of Experience for Online Teaching Using the UTAUT Model (Venkatesh, Morris, Davis, & Davis, 2003) and Dewey's Theory of Experience (Dewey, 1938)

As a whole, the study identified the elements that influenced the experience of public health faculty who develop and teach online courses. A number of aspects within the organizational and technology perspective were high determining factors that influenced the experience of developing and teaching online courses. The four essential factors that have been identified in their order of significance are: (1) time (2) organizational support including instructional design and teaching assistant support (3) faculty development and support to develop online content, and (4) ease of use and reliability of technology tools and the course management system.

The results conclude that the three determining elements, performance, effort, and facilitating conditions play an important role in faculty participation in online learning and are direct determinants to online participation. It is noted that these elements closely represent the components that have been selected from the recognized technology acceptance model, UTAUT. The two elements, ease of use and the usefulness factors in the technology perspective represent the perceived ease of use and the perceived usefulness in effort expectancy. The time perspective, training, resources, support, and the availability of a technology infrastructure have similar representation to the facilitation conditions of the UTAUT model. Lastly, the individual perspective of knowledge, skills, experience, perceptions, attitudes, and beliefs represent the performance expectancy element of the UTAUT.

Moderators such as computer/technology anxiety, self efficacy, attitudes toward technology, voluntariness and experience represent UTAUT, while experience was expanded based on the theory of experience Dewey (1938). It is important to note that

while performance expectancy, effort expectancy, and facilitating conditions were found to be direct determining influences on participants' participation in online learning. The element of the social influence was found not to have any influence as to whether participants participated in online learning nor were the moderators of age or gender found to have any influence on the participants developing and teaching online courses or their subsequent experience. Further, the element of experience was found to be a significant moderator to participants in the current study developing and teaching online courses. This experience included prior knowledge and experience of teaching, online learning, and academic organizational operations. Voluntariness had an indirect influence on the experience of participants in the study. Participants who held administrative roles were in a position where their roles influenced them to participate in online learning. Although an indirect influence on the experience, voluntariness shaped the experience of faculty who were administrators, but had no influence on faculty who did not have administrative roles. In other words, faculty who held administrative roles were forced, so to speak, to embark on the journey to develop and teach online courses because their role as administrator interfered with their traditional teaching responsibilities.

Overall, it can be suggested that the conceptual framework based on UTAUT (Venkatesh, Morris, Davis & Davis, 2003) and Dewey theory of experience (1938) provides a representation and explanation for public health faculty who develop and teach online courses at this particular school of public health located in the Southwest region of the United States; however, the conceptual framework is limited due to the fact

that it has not been validated through the testing methods of quantitative science and is only indicative to this study.

Summary of Discussion

The results of the study relate to previous research regarding faculty participation in developing and teaching online courses, as well as their experience in the process in notable ways. First, the study confirms that individual, system, and organizational perspective based on the constructs of UTAUT, performance expectancy, effort expectancy, and facilitating conditions, play an important role in public health faculty developing and teaching online courses. Second, the study confirms that performance expectancy, effort expectancy, and facilitating conditions play a role in influence the experience of public health faculty who develop and teach online courses. The importance of support, faculty development and training, and personnel resources for public health faculty developing and teaching online courses are essential to this study's participants' experience in developing and teaching online courses. The results, furthermore, confirm previous studies about the characteristics of successful online instructors developing and teaching online courses.

To have a successful experience developing and teaching online courses, participants found it essential to have support, resources, and faculty development and training. However, the current study also identified components that contribute to a unsuccessful experience. These include:

1. Lack of a continuity to the mission, vision, goals, or policy of the organization;

2. Lack of support system for the activities associated with developing and teaching online courses including faculty development, training, or instructional design support;
3. Lack of reward or incentive system;
4. Lack of school wide leadership; and
5. An organizational culture not reflective or accepting to developing and teaching online courses.

Implications for Practice

The present study provides valuable insights into the experience of public health faculty developing and teaching online courses and to a much larger extent, the practice of online teaching. Further, the present study contributes to the knowledge base about the experience of public health faculty who develop and teach online courses, the elements that contribute to their experiences, and, how public health faculty can best be served and supported while developing and teaching online courses. Studies of how faculty develop and teach online courses can help administration and faculty understand what faculty perceive as beneficial or helpful to the process that led them to develop and teach online courses and what underlying structures influence a successful or unsuccessful experience. Understanding how public health faculty develop and teach online courses and the elements that contribute to and or act in the experiences of how they develop and teach online courses may help institutions to identify, plan for, and provide support services to increase online faculty success in developing and teaching online courses in public health.

Although one cannot generalize the findings to different populations, this study provides transferability in that its in-depth descriptions should allow for more informed decisions. As online learning continues to grow faster than anyone has predicted, institutions, and in this case schools of public health, are struggling with the challenges and opportunities it creates. This study's findings concerning the essential structures of a critical aspects of online learning may allow institutions to better prepare and assist faculty and help them better understand their own roles, perceptions, skills, and knowledge in developing and teaching online courses.

Those responsible for policy, faculty development and training of faculty may find the results of this study useful due to the fact that this study provides descriptive data on the faculty's experience developing and teaching online courses that leads to either a successful or unsuccessful experience. The study offers a detailed rich description that suggests ways of supporting faculty so that they experience a successful, yet positive process, and can suggest elements that should be avoided so that public health faculty do not experience a negative, unsuccessful experience developing and teaching online courses. The results may suggest that an emphasis should be placed on the organizational perspectives and facilitating conditions by providing instructional design support personnel, faculty training and development, and organization policies that connect and reinforce rationale for online learning.

The participants in the current study consisted of five faculty who developed and taught online courses at a school of public health located in the southwest region of the United States. Due to the fact that participants already work as faculty, they may be

more focused and motivated to develop and teach online courses. Therefore, if support, faculty development, and personnel resources play a role in public health faculty developing and teaching online courses and were found to be essential to this study's participants, then it most likely will play an even more important role with faculty who are less experienced learners.

In a broader educational context, university and college administration, faculty, and instructional support personnel may find the results useful. Administration may want to pay closer attention to the individual, technology, and organizational perspectives that influence the experience and process of developing and teaching online courses. Again, given the characteristics of the study's participants, faculty clearly carry the dominant responsibility for developing and teaching online courses, where the institution carries the responsibility to provide a social, technical, and political system necessary to support public health faculty developing and teaching online courses. With major responsibility placed on faculty to develop and teach online courses, some faculty may prefer not to teach online if individual, technology, and organizational perspectives are missing or misaligned.

Administration and instructional support personnel may find it useful to consider the dominant role of the faculty when developing courses and the activities that support and or hinder the process and experience of developing and teaching online courses. The results suggest that administration should provide support services and to aid in the development and teaching of online courses with two major characteristics in mind: instructional design support personnel, teaching assistants and mechanisms to build

intellectual capital for developing and teaching online courses through faculty development and training.

The results of the study demonstrated a more successful experience occurred among faculty, when they have a balance between the individual, technological, and organizational perspectives. Administration might be advised to assist in providing systems of support that best meet the needs of faculty in knowledge and skills for online learning and course development, the use of technology tools, the course management system, and organizational support to ensure success in developing and teaching online courses.

The data also may allow faculty and administrators to make more informed decisions regarding faculty development and training programs as well as policy that influence the process of faculty developing and teaching online courses, their experiences developing and teaching online courses, and the overall organizational culture of developing and teaching online courses. For example, according to the study's results, administration may consider the assessment to identify needs of faculty participants in developing and teaching online courses, as well as organizational gaps and then design interventions and faculty development aimed at providing support to faculty as they develop and teach online courses. Furthermore, analyzing the organizational need for developing and teaching online courses will provide the organization an opportunity to streamline, develop, and implement policies to support the activities and processes of faculty developing and teaching online courses.

The results also help to present a clearer definition or description of what the experience of public health faculty who develop and teach online courses consist of. Developing and teaching online courses is not inherently good or bad, or negative or positive, successful or unsuccessful; it depends on faculty perceptions of their own individual characteristics, knowledge and skills, the perceived ease of use and usefulness of technology tools, a course management system, and a social, technical, and political system in place to support public health faculty in developing and teaching online course. This has implications for future research. As further research is developed regarding this important phenomenon, researchers may find it useful to refer to the essences identified by the current results. This may help shape clearer discussion about what is meant by the experience of public health faculty developing and teaching online courses when it is explored.

Limitations

Findings of the present study should be understood with consideration of the following limitations:

1. Data were obtained by means of self-report, which may be impacted by recall and bias.
2. Data and descriptions cannot be generalized due to the restricted geographical area, the small sample size, and the homogeneity level of the sample; however, this study provides transferability to similar contexts. Also the participants, as faculty in public health, may be atypical of online faculty in general.
3. The sample consisted of faculty from only one particular school of public health.

4. The researcher's own experience with online learning may be viewed as influencing the development of the interview guide and the interpretation of the participants' experience. To offset this possibility, the researcher engaged in the epoche process, triangulated data, and allowed participants to verify the accurateness of the interpretations. Additionally, the researcher disclosed his personal experience and assumptions about online learning in chapter one.
5. The researcher's experience in online learning may have affected how the participants described their own experiences. To counteract this possibility, the researcher did not share his feelings and experiences of online learning during the interviews.
6. The researcher interpreted the data as describing positive and negative and successful or unsuccessful with little description that fell in the middle or to which they felt indifferent. This interpretation may have ignored certain types of experience and other possible interpretations.

Recommendations for Further Research

The present study provides the foundation for further meaningful research. First, consideration should be given to the findings of this study. Findings can be used to inform a questionnaire or survey to design larger scale studies that explore faculty involvement in online teaching, whether in schools of public health settings or faculty from other domains of learning and subjects.

Second, consideration should be given to additional research that look at age differences of faculty involved in online teaching and whether age is an influential

element in the online teaching process. Additionally, consideration should be given to additional qualitative studies that present transferability of the conceptual framework that emerged inductively from the study to other contexts. Such a study would allow for a much greater confirmability and transferability.

Additionally, consideration should also be given to a possible longitudinal study of faculty, at the start of the online course development and teaching process. This type of study will answer questions and provide insights about how online faculty perceptions of developing and teaching online courses develop over time, providing a greater insight into the role of the individual, technological, system, and organizational perspectives in this ever-growing phenomenon.

A further study could be conducted to compliment this one by investigating in depth the transformation construct of the instructors' experience. Such a study could describe the faculty experience and answer questions about how the faculty experience compares or contrasts to other faculty experience in other schools of public health across the country and the process that emerged based on their experiences. Additionally, a further study could be conducted that explores the influence of fear, computer and technology anxiety on instructional innovation and how that might translates in successful online teaching and course development.

Furthermore, the researcher recommends a comparative study to better understand the relationship and experience between the individual (performance expectancy), system (effort expectancy) and organizational elements (facilitating conditions) and the faculty experience in online teaching. Such finding could increase

faculty and administration understanding of these components and roles they play in the process of developing and teaching online courses.

Lastly, the three themes outline in this study suggests future research. For example, the rhetoric of fear/anxiety could be explored through psychoanalytic theory; transformation could be explored through an epistemological lens or instructional theory; and, support could be explored through administrative, psychology or sociology perspective. This research is needed as online teaching progresses.

Summary and Conclusion

This phenomenological research study was based on the perceptions and experiences of five public health faculty who were involved in online teaching as told to the researcher during recorded, semi-structured interviews, written narratives, and artifact reviews. The researcher's recursive study of the participants' narrative data answered the research questions, which address the essence of the public health faculty experience in online teaching, challenges and barriers voiced, and potential benefits shared. The essential elements of the composite textural-structural description of the themes were reviewed in order to describe the overarching patterns across the participants' narrative data. Once the themes emerged, Dewey's theory of experience, UTAUT, and the literature, relating to each theme (fear, transformation, and support) were used to comment and discuss the themes. These discussion findings detailed examples of how the themes manifested themselves among the participants' narratives and experiences.

From an analysis of the participants narrative data, the study suggests that the salient features of the essence of public health faculty involved in online teaching deals with the continuity and interaction of the faculty's knowledge and skills to develop and teach online courses (individual perspective/performance expectancy), the continuity and interaction of a technology infrastructure used to support faculty who develop and teach online courses (technology infrastructure/effort expectancy), and continuity and interaction of the organization social and political system used to support faculty who develop and teach online courses (organizational dynamic/facilitating conditions). Also essential to the experience of public health faculty who develop and teach online course in this current study, is the transformation process including transformation of thought and intellectual capacity, transformation in instructional and pedagogical practice, and transformation of the faculty identify and the concept of the faculty self.

Further, essential to the experience of public health faculty who were involved in online teaching in this current study are faculty's perception of time, their role as faculty developing and teaching online courses, faculty development and training, resources, and instructional and organizational support. Although resources and transformation are essential to the experience, the interaction and congruence of the individual, technology, and organizational perspectives with their previous experiences are largely responsible for the experience of public health faculty who develop and teach online courses and are the dominant elements in determining the faculty's experience.

Public health faculty may experience online teaching positively or negatively or in terms of success or failure. Experiences of developing and teaching online are on a

continuum ranging from positive to negative or enjoyable to daunting, painful, and stressful; faculty find online teaching at the two extremes most notable. Benefits of developing and teaching online course include the benefits of increased opportunities for access to learning and to public health knowledge, flexibility of scheduling and teaching, improved faculty-student interaction, increased student participation, learning new approaches for teaching, learning new approaches to designing and course planning, new methods of course design that incorporates new technologies, and lastly the tools, processes, strategies, and frameworks for developing and teaching online courses that could be used to improve the levels of instruction and engagement within face-to-face courses. However, the challenges are evident when the three perspectives to develop and teach online courses are inadequate and out of alignment.

Faculty feel angry, frustrated, and discouraged by lack of connection of developing and teaching online courses to the mission, vision, goals, or policy of the school at large, lack of support system for the activities associated with online teaching including faculty development and training or instructional design support, lack of reward or incentive system, lack of school-wide leadership; and an organizational culture not reflective or accepting to developing and teaching online courses.

The findings strengthen previous research that discussed faculty participation in developing and teaching online courses as well as their experience within the process. In relation to the experience of public health faculty developing and teaching online course, the study found that support is not limited to the use of technology tools or providing access to faculty development, but the use of instructional support personnel for

guidance and reassurance as well as a system of organizational support. Indeed, organizational support in conjunction with faculty development and training, as well as resources foster a positive experience developing and teaching online courses. Therefore, many problems identified with public health faculty developing and teaching online courses may not be inherent in knowledge and skill itself, but may occur because administration, for whatever reasons, fail to create a system that promotes organizational support. These findings may encourage administration to reconsider the components needed for faculty to successfully develop and teach online courses and may help them develop and implement policies and procedures that better maximizes the successful elements in the experience of public faculty involved in online teaching and minimizes potential problems.

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APPENDIX A

SELECT JOURNAL AND FIELD NOTES ENTRIES

Field Notes

January 7, 2010. We sat in the home of Dr. EOHS03's. He appeared eager to share information. He spoke with excitement, used his hands to gesture. Whether he was describing his experience developing and teaching online courses at this particular school of public health or his time in Spain, he spoke with equal passion regarding his experience and the conclusions he had drawn. He often provided analogies to clarify his experience. The flow of the interview was great. We had been colleagues at this particular school of public health. We worked very well together. Again the interview was great. In part because of Dr. EOHS03 seemed to enjoy sharing stories about his online course work, openly discussing his experience. Towards the end of the interview when we were beginning to wrap up as we began to talk about the life of a graduate student and what new technologies were on the horizon. We ended quickly at that point.

February 15, 2010. I met Dr. EOHS04 at his office. We had a couple of minutes to chat and develop a sense of comfort and a sense of rapport with each other before the interview began. We both may have been a little anxious when we started. He seemed very comfortable in telling his story about his experiences developing and teaching online courses. I reiterated that I wasn't expecting or hypothesizing any particular view or experience and that I just wanted to know what the experience was like for him, whatever it was, however he would describe it. I think he talked even more freely after that. At the end of the interview after I turned off the tape recorders, he seemed to open-up even more: in part because we had both gotten more comfortable with each other, and probably also because there wasn't the issue of being recorded to consider. He talked mainly about the current course he was taking, and he pulled it up and showed it to me because he was impressed with the way it was designed and it had many and various types of resources. We finally moved to a discussion on Dubai and if the school was going to move forward on that deal.

March 5, 2010 We sat in Dr. HPBS05 office. She helped me enhance the volume on the digital recorders and the microphone and made sure that I was comfortable— being a wonderful host to me. After some social conversation, we easily began talking about her experiences in developing and teaching online courses. Given that she never taught an online course and that she spent considerable time working with another faculty learning how to teach online, she had a wealth of information to share. She talked with equal passion about the positive and the negative experiences, and demonstrated that education, and online education in particular, means a lot to her. Dr. HPBS05 laughed when she described real, examples of terrible moment with both instructors and students regarding online learning, in particular the online teachers users group. Likewise, she showed emotion as she discussed her excitement about being online and communicating

with people online. Dr. HPBS05 actually interviewed very well given a great deal of insight into her previous work in a different academic setting.

Journal Notes

January 5, 2010. The epoche process revealed my biases regarding online learning. I tend to believe that interaction is an essential part of the learning process. To be both affirmed and challenged assists in the acquisition of knowledge and in finding a way to integrate new knowledge into one's cognitive view. I also believe that online learning is not as difficult as the literature and some faculty make it out to be. I think it is rather easy and timeless. I also believe that not everyone is right or online learning just as not every student is right for online learning. The epoche process also revealed that I believe that one must be trained and developed into an online instructor in areas such as instructional design, pedagogy, active learning strategies, and in multimedia. Without that, there is a certain stagnation that will deter the learning. My experience has also biased me regarding the importance of online because when there has been a high quality course development, I've had a more positive experience in my online classes. This causes me to believe that high quality online course development leads to positive high quality learning. In summary, I am biased in thinking that instructional design methods, pedagogy and technology is necessary for learning and that it tends to create a positive learning experience. Likewise, my biases would suggest that I view the opposite experiences as leading to a negative or poor learning experience. During data collection and analysis, I must bracket these biases so that I don't project my personal beliefs and assumptions onto the data.

January 7, 2010. Dr. EOHS03 excitement in sharing stories about his online course experience seems to come in part because of his passion about public health and about life in general. He is a very positive person. He seems to think online learning is growing and understand the possibility of it not being the quality it can and should be. He has clearly experienced both positive and negative experiences with online learning. The friendships he has formed online seem especially telling regarding the real positive nature of the experience.

February 15, 2010. Perhaps most important to reflect on is what Dr. EOHS04 said off the record when the recording had finished. He showed me the online course he was taking. He seemed most impressed by the slide presentations that included an audio file that explained the slides. He was also impressed by the camtasia lecture modules he created in Flashform as well as his Howdy Video. His experiences at this particular school of public health have been marred by deception and backstabbing. This experience came out in the conversation. Although Dr. EOHS04 was one of first faculty at this particular school of public health, there was no respect for him or his tenure. He seemed to find solace in his online course. The negative emotion he showed when he talked about the school was striking. However, this negativity and disdain changed as he began to talk about online learning, technology, and his future with the two. The excitement that showed when he showed me his course convinces me that he has

experienced a positive or successful experience in online learning and that he believes that there can be both positive and negative experiences in an online course, much of which seems to be determined by the instructor's way of setting up the course and acting in it.

March 5, 2010. Dr. HPBS05 demographic information should be considered. She has had what might be considered to be an unusual amount of experience and provides an in-depth look into online learning. Of note might be that she, like others with much less experience, describes online learning that would be considered by most educators as inexcusable, unacceptable. However, she is a power house when it comes to the field of public health, with over 30 years of experience teaching, conducting research, and consulting to the US Government. She, like the others, also describes her experience with developing and teaching online courses in a similar vein centered around resources, support, faculty development and that her previous belief in the myths and assumptions regarding online learning, fundamentally shifted as she undertook the activities to develop and teach her online learning courses. Though Dr. HPBS05 has had the most experience in teaching of anyone interviewed so far, her experiences were much like the others. Although I gained new information from her interview, I may have reached data saturation. The same concepts and themes came to light. Though she was able to give vivid and plentiful examples that corroborate earlier interviews, I should consider whether or not I've reached data saturation as I review the transcript.

APPENDIX B**EMAIL TO ASSOCIATE DEAN OF OUTREACH PROGRAMS**

From: Terry T. Kidd/Texas A&M University
To:
bcc:

Dear DrXXXXX,

I hope all is well. As you know I am a doctoral candidate in the Curriculum & Instruction program with emphasis in Educational Technology at the Texas A&M University. I am currently conducting my dissertation research on the experience of public health faculty develop and teach online courses.

I would like to request your assistance in obtaining a comprehensive list of faculty from your institution who have developed and taught online course since the first semester the first online course was offered until the end of the 2009 academic year. This list will help identify potential participants for the study.

Participants will be interviewed at a time and location of their choice for a period of no more than one hour. In addition, participants will be compensated for their participation.

Along with the list of faculty who have taught online courses, I am also requesting that you provide contact information (Name and Email Address) for the potential participants.

For your perusal, I have provided a copy of the IRB approval letter from my institution to conduct this study as well as a brief summary of my study. Your faculty list would be greatly appreciated, as I am eager to begin my project. I am excited about the information your faculty could share and I look forward to providing to you a synopsis of the collected data.

Thank you in advance for your recommendations and assistance, and please feel free to contact me if you have questions regarding the study.

Respectfully Submitted,

Terry T. Kidd, Doctoral Candidate
Curriculum & Instruction Program
Texas A&M University

APPENDIX C

INVITATIONAL EMAIL

TEXAS A&M UNIVERSITY Invitational Email for Participants

Title of Project: Experience, Adoption, and Technology: Exploring the Phenomenological Experiences of Faculty Involved In Online Teaching at One School of Public Health

Investigators: Terry T. Kidd, Doctoral Candidate and Co-Investigator
Dr. Trina J. Davis, Faculty Advisor and Principal Investigator
Dr. Patricia J. Larke, Faculty Advisor and Principal Investigator

Dear Participant:

Upon recommendation from your institution, you are invited to participate in a study to explore the experiences of faculty who develop and teach online courses at your particular school of public health. Your experiences and opinions are extremely valuable to our study and we would like to ask for you participation.

I would like to request an interview to discuss your experiences in developing and teaching online courses at this one School of Public Health. The interview, which would last no more than 1 hour, will be held at your institution at a date and time most convenient for you. In addition, prior to the interview, I would like you to complete a written narrative of three questions that will provide additional insights into the experience of developing and teaching online courses. Involvement in the project will not involve any risks or costs for you and you may withdraw from the interview at any time. You will not be questioned about any University or personal activities other than those relative to your experiences developing and teaching online courses.

If you are interested in participating, please respond to this email no later than ___.

Thank you in advance for your participation and we look forward to talking with you!

Terry T. Kidd, Doctoral Candidate
Curriculum & Instruction Doctoral Program
Texas A&M University

APPENDIX D

INFORMATION SHEET TEXAS A&M UNIVERSITY

Information Sheet for Participants in Research Projects Involving Human Subjects

Title of Project: Experience, Adoption, and Technology: Exploring the Phenomenological Experiences of Faculty Involved In Online Teaching at One School Of Public Health

Investigators: Terry T. Kidd, Doctoral Candidate and Principal-Investigator
Dr. Patricia J. Larke, Faculty Advisor and Co-Investigator

I. Purpose of this Research Project

The purpose of this form is to provide you (as a prospective research study participant) information that may affect your decision as to whether or not to participate in this research. You have been asked to participate in a dissertation research study that seeks to explore the experiences of Public Health faculty who develop and teach online courses. I am interested in a comprehensive picture of the process and the experiences involved in such phenomenon. You were selected to be a possible participant because you have experience developing and teaching online courses in a school of public health setting. There will be a total of five (5) subjects involved in the study; one faculty from each division who have developed and taught online courses at this particular school of public health.

II. Procedures

If you agree to participate in this study, you will be asked to participate in (1) interview, which may last up to an hour. Your interview will be semi-structured in that you will be asked a series of open-ended questions and then asked to provide responses for each question. You may add additional comments based on the flow and/or context of the interview. You will be interviewed at your institution in a location of your choice. No other parties will be present at this interview. Your participation will be audio recorded.

In addition to the interview, you will be asked to complete a written narrative to three questions that will be used to provide further insights into the experience of faculty developing and teaching online course at this particular school of public health.

If you agree to participate, you agree to allow the researcher to publish data collected in a dissertation or in other print and electronic publications. After the interview, your tape will be transcribed and a written copy will be sent to verification and a final transcript will be sent upon your request. Only pseudonyms and/or code numbers will be used as identifiers on each tape and each transcript. At the conclusion of the research project, the taped recording of your interview will be destroyed.

III. Risks

Your participation in this study does not involve any risks. The risks associated with this study are minimal, and are not greater than risks ordinarily encountered in daily life.

IV. Potential Benefits

Your participation in this study may aid in the understanding of how public health faculty develop and teach online courses, the preparation needed to teach in online, and how public health faculty can best be served while developing and teaching online courses. By signing this form, you agree that no promise or guarantee of benefits have been made to encourage you to participate in this research project.

V. Anonymity and Confidentiality

Unless required by law, only the study investigator(s), representatives of Texas A&M University, and the Texas A&M University Institutional Review Board will have authority to review your study records. They are required to maintain confidentiality. At no time will the researchers release the results of the study to anyone other than individuals working on the project without your written consent.

Results of this study, however, may be used for teaching, research, publications, or presentations. If your individual results are discussed, your identity will be concealed by the use of pseudonyms and/or code numbers rather than your name or any other identifiers. No identifiers linking you to this study will be included in any sort of report that might be published. It is possible that the Institutional Review Board (IRB) may view this study's collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research. Your interview will be recorded because of the potential length of the interview and the need for accuracy when analyzing the data. After the interview, your taped recording will be stored in a locked file cabinet in the office of the researcher, Terry T. Kidd, who will be the sole individual with access to the recordings.

Your taped recording will be removed during the transcription process, which will be completed by the researcher. The taped recording will be destroyed at the conclusion of the research project which will end in May 2009.

VI. Compensation

You may receive up to \$10.00 in gift cards to Barnes and Noble Bookstore for participation in this research project. If you terminate the interview, you will still receive an initial \$5 gift card for participating in the research project.

VII. Freedom to Withdraw

You are free to withdraw from this study at any time without penalty as your participation is voluntary. You may decide not to participate or to withdraw at any time without your current or future relations with Texas A&M University or at the school of public health in which you are employed being affected. If you choose to withdraw, you will still be compensated for the portion of time that you did participate. A \$5 gift card to Barnes and Noble will be provided for your participation. You are free not to answer any questions and you may ask that the tape recorder be turned off at any time during the interview without penalty.

VIII. Participant's Responsibilities

If you voluntarily agree to participate in this study, you agree to abide by the rules of the project. I have the following responsibility: Complete the interview and written narrative protocol to the best of my ability.

IX. Participant's Permission

I have read and understand the Information Sheet and the conditions of this project. Questions that I have had about the project have been answered. I hereby acknowledge the conditions stated above and I give my voluntary consent for participation in this project.

If you have questions regarding this study, you may contact: Dr. Patricia Larke Faculty Advisor and Co- Principal Investigator at plarke@tamu.edu or Terry T. Kidd, Doctoral Candidate and Investigator at ttkidd@neo.tamu.edu.

This research study has been reviewed by the Human Subjects' Protection Program and/or the Institutional Review Board at Texas A&M University. For research-related problems or questions regarding your rights as a research participant, you can contact these offices at (979)458-4067 or irb@tamu.edu.

Please be sure you have read the above information, asked questions and received answers to your satisfaction. If you would like to be in the study, please email me with your reply at ttkidd@neo.tamu.edu.

Thank you,

Terry T. Kidd
Doctoral Candidate
Texas A&M University
College of Education and Human Development
Teaching, Learning, and Culture Program

APPENDIX E**RESPONSE EMAIL TO PARTICIPANTS**

Dear Prospective Faculty,

Thank you for accepting invitation to participate in the proposed research study for my doctoral dissertation. Enclosed, you will find two documents. The first is the Informed Content document. Please take a moment to read and sign it. Please return the consent to the office of Ms. Peggy Powell at

Peggy Powell
UT School of Public Health
1200 Herman Pressler, RAS/W-242
Houston, Texas 77030
(713) 500-9149 (Fax #)

The second document is the narrative question protocol. Please read and complete the document, giving as such information as possible. When you have completed answering the questions, please email the completed document back to me by June 1, 2009.

If you have any questions, please feel free to contact me at any time.

Thank you once again and I look forward to meeting with you to conduct the face to face interview.

Best Regards,

Terry Kidd

Terry T. Kidd
Doctoral Candidate
Curriculum & Instruction Doctoral Program
Texas A&M University
email: tkidd@neo.tamu.edu

APPENDIX F**WRITTEN NARRATIVE PROTOCOL****Experience, Adoption, and Technology: Exploring the Phenomenological Experiences of Faculty Involved In Online Teaching at One School Of Public Health****Participant ID:** _____ **Date of Completion** _____**Introduction:**

We are conducting a dissertation case study that explores the faculty experience as they develop and teach online at the School of Public Health. Your views of your experience are extremely valuable to us, therefore, we would like for you to share as much information as you can for each question. Please complete the narratives by _____ and send via email to tkidd@neo.tamu.edu.

Narrative Questions

1. How would you describe your experiences designing and teaching online course at the School of Public Health?
2. While developing and teaching online courses at this particular school of public health, did you encounter any barriers or challenges? If so what were they and how did you overcome them?
3. What recommendations would you offer to school administration and to other faculty based on your experiences to support faculty efforts to developing and teach online courses at this particular school of public health?

Thank you,

Respectfully,

Terry T. Kidd

APPENDIX G**INTERVIEW PROTOCOL****Interview Protocol**

Participant ID: _____ **Interviewer:** _____ **Date:** _____

Spoken Introduction:

We are conducting a case study that explores the experiences of public health faculty who develop and teach online. I am particularly interested in the comprehensive picture of the process you went through to develop and teach online courses at the School of Public Health. Your views and experience are extremely valuable to me, therefore, I would like for you to share as much information as you can for each question. I have scheduled an hour for the interview; however you may take as much time as you need to answer each question. Do you have any questions before we begin?

Part A. Background Information

1. Tell me a little about yourself?
 - a. How long have you been in the public health education field?
 - b. How long have you been at SPH
 - c. Which division is your appointment?
 - d. What courses do you teach?
 - e. What are a few of your research interests?
2. When and why did you develop and teach your first online courses at SPH?
 - a. What was the course?
 - b. What motivated you?
 - c. How did your journey begin?
3. What were your expectations for developing and teaching online?

Part B. Preparation for Designing and Teaching Online Courses

4. What were your main concerns about developing and teaching online courses?
5. What would you say are the advantages and/or disadvantages for developing and teaching online course?
6. What beliefs and attitudes did you have towards online teaching prior to developing and teaching online and how did they change?
7. How were you prepared to develop and teach online courses at the School of Public Health?
8. Did this particular SPH provide you with any formal training opportunities or assistance in developing your online courses? If so describe the training and assistance?
 - a. What were the topics? Where they helpful?

9. Did you take advantage of any informal opportunities to assist you in the development of your online courses? If so, what were they and how did it assist you in developing your online courses?
10. Can you walk me through the process in steps of how you developed your online courses at the School of Public Health? Please detail your interactions with people, departments, administration
11. What factors did you take into consideration when designing the course (s)? (Students, content, goals/educational purpose, knowledge, skills, attitudes of the learner, other people)
12. While in the process of developing your online course(s) did you encounter any barriers or challenges? If, so how did you overcome them?
13. How was designing your online course(s) similar or different from designing a face to face course?
14. While designing your online course(s), what sources of information did you rely on? Journals, books, websites, staff personnel etc? Why did you seek this information? How did you use the information?
15. Describe for me your overall experience developing and teaching online course(s)?
16. What have you learned since developing and teaching online course(s)?

Part C. Additional Assistance

17. Reflect on your earliest experience developing and teaching online courses, is there anything you would do differently at this point in your career teaching online?
18. Are there any recommendations you would offer to school administration to help faculty who wish to develop and teach online course? What would it be?
19. Do you have anything else you would like to share about your experience developing and teaching online courses at the School of Public Health?

VITA

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EDUCATION

- | | |
|-------|---|
| Ph.D. | Educational Curriculum and Instruction 2011 Texas A&M University, College Station, Texas |
| M.Ed. | Instructional Technology 2003 University of Houston, Houston, TX |
| M.S. | Information Systems Technology 2002 University of Houston, Houston, TX |
| B.S. | Information System Technology 2001 University of Houston, Houston, TX |

SELECTED PUBLICATIONS

- 1 Kidd, T. T. (2009). Butterfly under a pin: Exploring the voices and stories untold of faculty who adopt ICTs for teaching and learning practices. *Education and Information Technology*, 15 (3), 155-170.
- 2 Kidd, T. T. (Ed). (2009). *Online education and adult learning: New frontiers for teaching practice*. Hershey, PA: IGI Global.
- 3 Kidd, T. T. & Chen, I. L. (Eds.). (2009). *Wired for learning: An educator's guide to web 2.0*. Charlotte, NC: Information Age Publishing.
- 4 Kidd, T. T. & Chen, I. L. (Eds.). (2008). *Social information technology: connecting society and cultural issues*. Hershey PA: Information Science Reference.
- 5 Kidd, T. T. & Song, H. (Eds.). (2007). *Handbook of research on instructional systems & technology*. Hershey PA: Information Science Reference.