FACTORS AFFECTING FACULTY PARTICIPATION IN ONLINE DEVELOPMENT AT A HIGHER EDUCATION INSTITUTION

A Dissertation

Presented to

The Faculty of the Department of Library Science and Technology

Sam Houston State University

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

---

by

Courtney Robert Hebert

May, 2021

FACTORS AFFECTING FACULTY PARTICIPATION IN ONLINE DEVELOPMENT AT A HIGHER EDUCATION INSTITUTION

by

Courtney Robert Hebert

_____

APPROVED:

Kimberly LaPrairie, PhD
Committee Director

Chase Young, PhD
Committee Co-Director

William Angrove, EdD
Committee Member

Jalene Potter, PhD
Committee Member

William Monroe, PhD
Committee Member

Stacey L. Edmonson, EdD
Dean, College of Education

DEDICATION

"Blessed are those who find wisdom, those who gain understanding, for she is more profitable than silver and yields better returns than gold. She is more precious than rubies; nothing you desire can compare to her." Proverbs 3:13-15

To Sami, Celie, and Audrey—You, my dear girls, are my biggest inspiration. May you always know that there are no limits to what you can achieve.

ABSTRACT

Hebert, Courtney Robert, *Factors affecting faculty participation in online development at a higher education institution*. Doctor of Education (Instructional Systems Design and Technology), May, 2021, Sam Houston State University, Huntsville, Texas.

Faculty development continues to be a significant component of higher education institutions. The purpose of this phenomenological case study was to understand the faculty experience surrounding participation in online professional development, thereby discovering the complex structures that influence participation and impact completion of formal online offerings. The research was supported through systems theory, and the iceberg model was used to conclude the findings. Full-time instructional faculty at a tier-one university in the southern United States who registered for a university-sponsored accessibility and universal design for learning training were recruited to participate in semi-structured interviews to discuss their online faculty development experiences. The findings of the study indicate that the factors that influence faculty to participate in online faculty development, such as an institutional mandate, are often the same regardless if they complete the training or not. Additionally, faculty who complete online faculty development may have similar but fewer barriers to completion than faculty who do not complete. Systematic implications for lowering barriers and increasing support for faculty in online professional development are presented, and further research recommendations are discussed.

KEY WORDS: College faculty; Higher education; Online faculty professional development; Phenomenology; Systems thinking

ACKNOWLEDGEMENTS

Obtaining a doctoral degree has been a goal since my second semester of undergraduate. Often throughout the past 13 years, that dream seemed unachievable. I do not doubt that I am on the path that was meant for me—but this journey was not chartered alone. I have been blessed with the absolute best support system to guide me along the way.

Brenton, there will never be enough "thank yous" for your emotional, financial, and tangible support. Thank you for being my partner in all things and for seeing me through the hard times. Love you, always. My sincere appreciation is extended to my parents and parents-in-law, siblings and siblings-in-law, nieces, and nephews for your never-ending patience and understanding as I achieved this dream of mine.

I'm not sure why I have been fortunate enough to work with such an amazing group of women, but to all of my work crew, thank you for making my work interesting and worthwhile. A special thank you to my mentors, Drs. Radhika Krishnadas and Hala Esmail—thank you for paving the way before me and showing me what is obtainable. I am lucky to have both of you as an example of hard work, leadership, and friendship.

One of my greatest joys over the last four and a half years has been my coursework in the Instructional Systems Design & Technology Program at Sam Houston State University. I appreciate all the faculty and staff that I have connected with at Sam Houston, including members of the Graduate School who were so helpful in crafting this document. I would specifically like to thank Drs. Marilyn Rice and Kimberly LaPrairie for their continued guidance and leadership throughout my coursework. Your passion for your students is evident and so appreciated. Team Doctor Bearkat, you guys made this

experience so much fun! I am grateful to have made friends such as you, and I hope our friendships continue for a long time.

Thank you to my incredibly talented and knowledgeable committee for your feedback, edits, suggestions for improvement, but most of all for your time. I could not have asked for a better chair in Dr. Kimberly LaPrairie. Dr. George Moore, you are so appreciated for setting us off on the right foot and especially for your humor. Thank you, Dr. Chase Young, for helping us reach the end. My sincere appreciation goes out to Drs. Angrove, Potter, and Monroe for assisting me throughout the process.

TABLE OF CONTENTS

Page

CHAPTER I

Introduction

Faculty professional development is an important and necessary part of any successful educational institution. Particularly at large research institutions, instructional faculty are often hired as subject matter experts expected to advance research in a particular field. This standard practice in higher education creates an institutional environment where instructional faculty are commonly experts in their field and rarely experts in teaching (Gyurko, MacCormack, Bless, & Jodl, 2016; Henley & Magelssen, 1990; Kane, Sandretto, & Heath, 2002; Weimer & Lenze, 1997). An increase in the scope of faculty development literature over the last 50 years has drawn attention to the importance of developing faculty members (Beach, Sorcinelli, Austin, & Rivard, 2016; Lewis, 1996; Sorcinelli, Austin, Eddy, & Beach, 2006). Pragmatic research-based principles provide faculty developers with the information needed to facilitate effective professional development. Research is readily available regarding effective design and delivery methods, as well as the impact of development on faculty practice and attitudes. While the audience of most faculty development literature is faculty developers, the subjects of the research are primarily faculty members. Teaching and learning centers have utilized this relationship to expand significantly over the last 40 years (Cook & Marincovich, 2010; Lewis, 1996), but some instructional faculty still never benefit from faculty development (Fink, 2013). Personal and professional factors continue to be a leading contributor to the lack of attendance and participation in faculty development by instructional faculty in higher education (Gordan, 2018; Manduca, 2017; Powell, 2006; Sener & Hawkins, 2007; Sunal & Hodges, 1997; Wood, 2015). Further, a lack of

progressive methods and contemporary topics in development centers may also contribute to this low attendance (Meyer, 2014; Powell, 2006; Sullivan et al., 2013). Higher education administrators, leaders, and faculty developers must cultivate the positive and address the negative factors impacting instruction and professional development in higher education.

Faculty professional development has been defined many ways (Stes, Min-Leliveld, Gijbels, & Van Petegem, 2010; Taylor & Colet, 2009). Initially, a self-directed learning process, when organized faculty professional development started at institutions of higher education, it was limited to sabbatical leave, empirical research, or advanced degrees until the 1960s (Lewis, 1996; Sorcinelli et al., 2006). Later, universities would open teaching and learning centers to offer more formalized modes of professional development (Lewis, 1996; Sorcinelli et al., 2006). Teaching and learning centers have aimed to sustain and advance their initiatives as a product of faculty development in higher education—the same goals recorded more than 10 years ago (Beach et al., 2016; Sorcinelli et al., 2006).

Modern teaching and learning centers are tasked with providing a wide range of development opportunities in ways that best meet the unique needs of all instructional faculty (Brookfield, 1985; Levinson-Rose & Menges, 1981; Wynants & Dennis, 2018). Instructional faculty are one of the most integral components to meeting the goals of an institution of higher education, and therefore their professional needs are important (Schuster, Wheeler, & Associates, 1990; Soomro & Ahmad, 2013). Faculty members may serve in multiple roles, such as researcher, instructor, and advisor, at the same time or throughout their career (Sorcinelli et al., 2006). Thus, faculty needs vary depending on

their professional role(s) and career stage. The more responsibilities a faculty member has, the less realistic it becomes to expect them to maintain proficiency in their field, as well as locate, interpret, and apply innovative teaching methods on their own (President's Council of Advisors on Science and Technology [PCAST], 2012). For this reason, the training and tools made available to faculty should meet their immediate needs and should be provided to them in the most convenient mode (PCAST, 2012; Rocca, 2010). Further, teaching and learning centers rarely offer activities that cover the scope of all faculty responsibilities. Development opportunities have mainly focused on innovation in teaching and learning, which are especially critical for instructional faculty in higher education (Beach et al., 2016; Sorcinelli et al., 2006). The focus of development in teaching and learning is important for faculty. However, personal and organizational development are also key components of development that are often sidelined (Schuster et al., 1990). Yet, an emphasis on faculty development offerings to bring about organizational change has increased in recent years (Beach et al., 2016). Institutions with the most effective faculty development programs utilize a coordinated, systematic approach to meet all needs of all faculty at all stages of their career (Schuster et al., 1990).

Overall, the methods and topics of faculty development at institutions of higher education have been consistent for the last 20 years. Short workshops on issues such as technology integration, active teaching strategies, student assessment, and curricular reform are consistently the focus of America's teaching and learning centers (Beach et al., 2016; Sorcinelli et al., 2006). In the future, institutions need to present development opportunities in alternative methods related to student assessment, online teaching, and

diversity in education (Beach et al., 2016). Though popular, one-time workshops and seminars for professional development are generally not sufficient to promote changes in faculty attitude and practice (Henderson, Beach, & Finkelstein, 2011; Levinson-Rose & Menges, 1981; Rienties, Brouwer, & Lygo-Baker, 2013). Short workshops as a method of delivery for faculty professional development are still prevalent even though the design is not logical when aiming to make a significant impact on faculty and their students (Beach et al., 2016). Instead, change takes time and sustained effort, meaning the most effective professional development offerings last at least four weeks, with some lasting much longer (Henderson et al., 2011; Holland, Sherman, & Harris, 2018; Manduca, 2017).

A wide range of alternative modalities for faculty development, including online offerings, have been vetted by researchers and include appropriate design principles (Hixon, Buckenmeyer, Barczyk, Feldman, & Zamojski, 2012; Karagiorgi, Kalogirou, Theodosiou, Theophanous, & Kendeou, 2008; McMurtry, 2013; Salmon, Gregory, Dona, & Ross, 2015; Wynants & Dennis, 2018). Although online undergraduate and graduate opportunities are multiplying at institutions of higher education, asynchronous online programs is not a standard method of faculty development. Online development opportunities are the least common type of professional development provided by institutions but are an offering that research universities wish to increase (Beach et al., 2016). As additional university-level courses are transferred to an online environment, online faculty development is a logical next step to provide online instructors with the experience of an online student (Herman, 2012). Further, the nationwide increase in

adjunct faculty has created an obligation for institutions to provide adequate training and community over a distance (Gyurko et al., 2016; Shattuck, Dubins, & Zilberman, 2011).

The educational reform movements at the beginning of the 21st century and the rapid increase of online education has highlighted a need for more relevant learning experiences and an increased use of adult learning theories (Aderinto, 2006). Adults have replaced traditional-aged students as the majority in colleges and universities across the United States (Chen, 2014; Lumina Foundation, 2019), revealing a need for adult learning theories to be implemented in undergraduate and graduate education. The inclusion of adult learning theory to facilitate the design of faculty development is one research-based model that is noticeably absent from the research (Meyer & Murrell, 2014), indicating that adult educators, faculty members, and educational researchers are not adequately applying the theories in practice. After more than 50 years of research into how adults learn, a single approach or model has not yet emerged, yet we know more about their methods, preferences, and motivations than ever before (Merriam, 2004). Adult learning theories facilitate the design of effective faculty development, and it is the responsibility of faculty developers to implement modern, well-researched practices.

All faculty development offerings, regardless of modality, should be evaluated for effectiveness, which can be challenging to measure. The belief that participation in faculty development results in teaching improvements is common (Kennedy, 2016), although the correlation between faculty professional development and student learning can be challenging to measure as researchers rarely trace the effects beyond the faculty (Manduca, 2017). The degree of effectiveness of faculty training is typically evaluated in measures of changes to faculty knowledge and practice and increases in student learning

(Darling-Hammond, Hyler, & Gardner, 2017). However, the changes to faculty practice, attitudes, and knowledge are often self-reported, generating concern for the correlations drawn between professional development, faculty practice, and student learning (Baldwin & Ford, 1988; D'Avanzo, 2014; Kennedy, 2016; Levinson-Rose & Menges, 1981). As a result, sample sizes, artifact analysis, and research methods throughout the body of research have been called into question (Hill, Beisiegel, & Jacob, 2013; Kennedy, 2016). Researchers are now tasked with executing additional and vigorous investigation into the complex relationships and factors that affect professional development.

Although the need for faculty professional development has been established (Post, 2011; Wynants & Dennis, 2018), several factors continue to contribute to the lack of attendance and completion of faculty development by instructional faculty in higher education. Fink (2013) reported that only approximately 30-40% of two- and four-year institutions in the United States have an organized development center, and because faculty development is often voluntary, only about 25-30% of faculty members participate in university-sponsored faculty development each year. A struggle for time and resources may cause conflict between faculty members and the institution, making it challenging to meet both personal and institutional goals (Adham, Kasimin, Isa, Othman, & Ahmad, 2015). Faculty teaching load, lack of rewards, travel plans, inconvenient training locations, and limited training resources are common barriers to participation in professional development for faculty (Cook & Steinert, 2013; Manduca, 2017; PCAST, 2012). These barriers may have an even more significant impact on faculty growth and student learning, as research suggests that environmental factors inhibit instructional faculty from utilizing innovative instructional strategies in their classrooms (Henderson

& Dancy, 2007). A plethora of factors impacts instruction and professional development in higher education, making it imperative for administrators and leaders to cultivate the positive and address the negative, thereby allowing the institution to plan for successful professional development (D'Avanzo, 2014; Wynants & Dennis, 2018).

Statement of the Problem

Faculty professional development in institutions of higher education has grown substantially since the unitary option of sabbatical leave in the 1800s (Beach et al., 2016; Lewis, 1996; Sorcinelli et al., 2006). However, the research (Baldwin & Ford, 1988; Hixon et al., 2012; Meyer, 2014) related to faculty professional development has not produced enough information to enable faculty developers to meet the needs of all faculty members consistently. As evidence of this concern, Educause has recognized faculty development as a key issue in teaching and learning since 2014 (Brown, 2019). Educause's key issues reveal significant and practical concerns within higher education as the issues are collected from the Educause community, made up of higher education and IT professionals (Brown, 2019). Identifying faculty development in higher education as a critical issue prompted the organization to provide principles for personalized (Leafstedt, 2018) and online faculty development (Wright, 2016), among other recommendations.

Many factors contribute to the issue of faculty development, including faculty developers, organizational leaders, and faculty members. Each of these factors has the ability to contribute to the success or failure of faculty development initiatives. Institutional structures, such as a lack of topic diversity and relevancy, incentives, funding, and rewards for excellent teaching, can prevent faculty from participating in

faculty professional development (Manduca, 2017; PCAST, 2012; Sullivan et al., 2013). Institutional structures, such as faculty workload, scheduling, and travel, may even be harmful to faculty professional development (Cook & Steinert, 2013; Gordan, 2018; Powell, 2006). Organizational leaders at institutions of higher education may also support or impede attendance of faculty professional development (Henderson, Mestre, & Slakey, 2015; Jones, 2013; Wood, 2015). Even when faculty participate in development opportunities, changes to their attitudes, beliefs, and practices can be slow. Research has indicated that resources, time, territorial conflicts, teaching space, teaching load, the slow dissemination of information from research to practice, and organizational structure are significant barriers to change in organizations (Henderson et al., 2015; Manduca, 2017; Sunal & Hodges, 1997).

While a variety of specific participation and change barriers have been identified, the vast number of elements within a system of higher education makes it difficult to understand change, and organizations and faculty developers have not been able to leverage this information to respond to specific circumstances (Borrego & Henderson, 2014). Therefore, it is no surprise that faculty developers do not have a clear understanding of faculty barriers and needs. As a result, individual faculty needs are not being met, and participation in faculty professional development is low (Levinson-Rose & Menges, 1981; MacKinnon, 2003; Meyer, 2014; Post, 2011; Sweet, Carpenter, & Blythe, 2017).

As teaching and learning centers are the most common producer of faculty professional development on higher education campuses, faculty developers play an integral role in meeting faculty needs. The topics of faculty professional development

activities offered by teaching and learning centers have remained stagnant for the last 20 years (Beach et al., 2016). As student populations and course modalities become more diverse, the faculty development that faculty receive also needs to change (Chen, 2014). Further, short workshops continue to be the most popular format of faculty development, despite research support that sustained interaction and alternative methods are more effective (Beach et al., 2016; Henderson et al., 2011; Levinson-Rose & Menges, 1981; Rienties et al., 2013). Although interest in adult learning theories has returned in the 21st century, practitioners rarely use adult learning theory to guide their practice (Meyer & Murrell, 2014).

Researchers have concluded that faculty development can have a positive impact on teaching and learning, highlighting it as a critical component for researchers and institutions to understand more completely (Kennedy, 2016). Institutions of higher education are not able to adequately meet the needs of instructional faculty if they do not have a solid understanding of the supports and impediments that contribute to faculty participation in development opportunities (Elliott, Rhoades, Jackson, & Mandernach, 2015). Traditionally, research into the issues of faculty professional development has focused on the individual elements that encompass faculty development, such as design. However, practitioners need to combine studies of professional development with a more in-depth analysis of both the system interactions and participant characteristics to more clearly understand effective programming (Manduca, 2017; Rienties et al., 2013). Research of the individual elements affecting faculty professional development is essential, but the relationships between these elements are even more so. The institutional environment affects participation in professional development and changes

to practice (Manduca, 2017; Wright, 2013). Research has gone so far as to suggest that environmental factors can affect learning retention and transfer (Baldwin & Ford, 1988). As a result of the ever-growing emphasis on quality assurance and external reviews in higher education, "research on educational development in higher education and systematic evaluation of educational development initiatives should be high on the agenda" (Frenay & Saroyan, 2010, p. 159). Therefore, the factors that affect participation in online professional development for higher education faculty need to be investigated and evaluated.

Purpose of the Study

Research regarding completion rates of faculty development is scarce (Baldwin & Ford, 1988; Steinert et al., 2010; Sweet et al., 2017). The available research is generally a list of reasons why instructional faculty do or do not complete faculty development opportunities offered by their institution. The depth of research is not sufficient to understand how numerous personal and environmental supports work together to provide valuable continuing education to all instructional faculty and how the constraints inhibit faculty from participation in faculty development (Austin, 2011; Caffarella & Zinn, 1999; Manduca, 2017). The results of the research provide more insight into the systematic relationship between these factors and faculty participation in professional development (Meyer, 2014).

The purpose of the research study was to understand the faculty experience surrounding participation in online professional development. To help achieve this purpose, a phenomenological case study was conducted to discover the complex

structures that influence instructional faculty members' participation in online professional development.

Research Questions

Through the research study, I aimed to ascertain the factors that impact instructional faculty members' participation in online professional development. Case studies are the preferred method of research when the researcher is (a) asking how or why questions, (b) when the researcher has little or no control over the events, or (c) when the researcher desires to understand a phenomenon in real-life (Yin, 1994). Therefore, the primary research question that influenced this study is

1. What factors affect higher education instructional faculty members' participation in online professional development training?

The following sub-questions were addressed in the study to obtain more specific information regarding the chosen case:

a. What factors support higher education instructional faculty members to complete a university-sponsored online professional development training on accessibility and universal design for learning?
b. What factors impede higher education instructional faculty members from completing a university-sponsored online professional development training on accessibility and universal design for learning?

Significance of the Study

Faculty professional development is an integral component of institutions of higher education (Kennedy, 2016; PCAST, 2012; Rocca, 2010). Additionally, the vast number of elements within a system of higher education make it difficult to understand

the process of change, especially as it relates to faculty and student growth (Borrego & Henderson, 2014). To meet the needs of faculty, which in turn allow faculty to meet the needs of students, faculty should be provided with relevant and accessible faculty development (Levinson-Rose & Menges, 1981; MacKinnon, 2003; Meyer, 2014; Post, 2011;).

Faculty developers, organizational leaders, faculty, and students all stand to benefit from the study. Although institutional faculty development is often centralized to a particular niche, a systematic involvement of faculty, instructional, and organizational development allows faculty developers to accommodate a variety of faculty learning needs and styles while also directly impacting the institution at large (Grupp, 2014). Faculty developers can benefit from the knowledge of how particular supports and constraints affect instructional faculty to provide more accessible and meaningful continuing education to all instructional faculty. In their capacity, faculty developers can function as change agents and bring about organizational change, but they cannot do this alone (Grupp, 2014).

The primary responsibility of institutions of higher education is to ensure that students are gaining a proper education (Hibbert & Semler, 2016). Cultivating a culture of teaching and learning is an important first step in achieving this mission. Administrative support is especially important to promote excellence in teaching and faculty motivation to engage in continuous education (Feldman & Paulsen, 1999). Therefore, organizational leaders are instrumental in driving programming and support for teaching and learning centers. Organizational leaders can promote teaching and

learning centers by reducing barriers and increasing support to participate in faculty development.

Finally, faculty members may generate a more precise understanding of their motivations and reservations for participating in faculty development. Self-reflection is a powerful method for improvement. Faculty engaging in self-evaluation or reflection are more likely to maintain motivation and improve their teaching (Feldman & Paulsen, 1999). A more precise understanding of their own developmental needs may increase overall participation in faculty development, which can lead to increased faculty vitality (Kumar, 2018).

Theoretical Framework

When an institutional system no longer serves the purpose for which it was designed, either something within the system or the entire system must change (Banathy, 1992; Rose & Nyre, 1977). Whether the system as the whole or only one component needs replacing, the change must be applied to the entire system. Systemic changes are ideal as these changes are more effective than partial changes (Anderson, 1993; Banathy, 1992; Reed, 2000; Wagner, 1993). However, the abundance of variables in educational systems, such as higher education, makes it difficult to comprehend, view, and evaluate change on either systemic or partial levels (Adham et al., 2015; Borrego & Henderson, 2014). Although education has widely utilized systems theory to enact change within the system (Drack & Schwarz, 2010), stakeholders still need a better understanding of the complex environment of education (Ghaffarzadegan, Larson, & Hawley, 2017; Powell & Bodur, 2019). In relation to the research study, the issue of faculty development is one intricate component of the educational, institutional, and departmental systems in which

faculty participate (Henderson et al., 2015). The intent was not to prove or disprove system theory but to situate the case, data collection, and data analysis from within the systems perspective. Faculty professional development is discussed as one element of an effective higher education system. In Chapter II, various components that encompass, affect, and benefit from faculty development in the system of higher education institutions are discussed.

Definition of Terms

The following terms and definitions are intended to help the reader understand the context of the terms as used in this research study.

Accessibility. The ability for all humans, regardless of ability or disability, to properly utilize provided materials or have an equally effective experience through alternative means (https://www.w3.org/WAI/fundamentals/accessibility-intro/).

Adult. The stage in a person's life where they are able to care for themselves, become responsible for their own lives, and are self-directing (Knowles, 1990b).

Balancing Feedback Loops. A cause and effect reaction where "the strengths of the feedbacks [are] relative to the impacts that they are trying to correct" (Meadows, 2008, p. 153).

Completion Status. There are three completion statuses:

Registered. Registered for the training on the training website, but did not enroll in the LMS course.

Enrolled. Enrolled in the LMS course, but did not complete the training. These faculty may have participated in some of the training, but completion of the training

would have required passing all quizzes with at least 70% accuracy and achieved at least 40/50 points, or 80%, on the capstone assignment when graded using a rubric.

Completed. Passed all quizzes with at least 70% accuracy and achieved at least 40/50 points, or 80%, on the capstone assignment when graded using a rubric to receive a certificate of completion for the training. The capstone assignment is an accessibility action plan, which should include a goal statement, a list of identified accessibility barriers, solutions and resources required for eliminating each barrier, and start and end-dates for applying the solution(s) for each barrier.

Course. The organization of instructional content, learning activities, and discussion boards built in the learning management system (LMS).

Events. "Things that happen that we can see or observe" (Monat & Gannon, 2015, p. 20).

Field notes. Personalized summary of each participant interview used to ensure accuracy of collected data and the researcher's actions (Given, 2008).

Full-Time Instructional Faculty. Full-time instructional faculty shall include employees designated with a title included under "full-time academic ranks" that carry faculty status and are the primary instructor for a credit course (or have been a primary instructor within the last two major semesters, i.e., spring or fall), including instructor; assistant professor; associate professor; professor; or designated professor.

Mental Models. "Paradigms or belief structures that attempt to interpret and/or simplify the universe in which we live. Examples are "An MBA will make you rich," "Incentive compensation increases productivity," and "Girls like Corvettes." Mental

models often lead to systemic structures which are either intentional or emergent" (Monat & Gannon, 2015, p. 20).

Online Education. The sending and receiving of instructional materials and activities to learn via the Internet (Cook & Steinert, 2013).

Participation. The activities relative to the training that faculty engage in between the registration and completion (or the end) of a faculty development offering. In the university-sponsored accessibility and UDL training, participation could have occurred at various times over four weeks and in the LMS course.

Patterns. "Sets of consistent and recurring observable events. Patterns may be physical, behavioral, or mental. Patterns are usually caused by underlying systemic structures and forces" (Monat & Gannon, 2015, p. 20).

Professional Development. A holistic approach to career development, "which focuses on each faculty member as a person and is concerned with his or her development as a scholar" and may include "career planning and support for scholarly skills such as obtaining research grants, publishing, and supervising scientific activities…communication and managerial skills and time management… [and] organizational development" (Frenay & Saroyan, 2010, p. 143).

Research Journal. A method for identifying researcher bias before and during the data collection process, as well as organizing changing perspectives and interpretations (Cohen, Steeves, & Kahn, 2000; Laverty, 2003).

Systemic Structure. "The manner in which a system's elements are organized or interrelated. The structure of an organization, for example, could include not only the organizational chart but also information flows, interpersonal interactions and

relationships, rules and procedures, authorities and approval levels, process flows, routes, attitudes, reactions and the incentives and fears that cause them, corporate culture, and feedback loops" (Monat & Gannon, 2015, p. 20).

System Theory. A unified scientific model, which considers a system as a whole rather than as a set of individual parts (Bertalanffy, 1950, 1968; Laszlo & Krippner, 1998).

Tier-One University. Commonly called tier-one, the actual designation from Carnegie Classifications is "doctoral universities - very high research activity" and is formerly known as "R1." Included in this designation are "institutions that awarded at least 20 research/scholarship doctoral degrees during the update year and also institutions with below 20 research/scholarship doctoral degrees that awarded at least 30 professional practice doctoral degrees in at least 2 programs" (http://carnegieclassifications.iu.edu/, para. 2).

Training. A development opportunity offered both online and blended on the topic of accessibility and universal design for learning; includes an online course.

Universal Design for Learning (UDL). A framework to aid educators in the development of content, activities, and assessments that are representative of, and engaging and relevant to the participants (http://www.cast.org/our-work/about-udl.html#.XcNfczNKiUk).

Assumptions, Limitations, and Delimitations

Assumptions. Assumptions of the ontological and epistemological views of qualitative research were considered for this study. The participants' experiences were assumed to be socially constructed and subjective (Merriam & Tisdell, 2016). A related

assumption was that the participants answered the interview questions in a manner that most accurately represented their view of the world and the situation. Participant confidentiality was one measure used to assist with this assumption (Bleich & Pekkanen, 2015). Transparency in research, including reporting the sampling frame, including the number of interviews sought, the number of interviews obtained, and the number of interviews denied, was also utilized to help readers make informed decisions regarding the validity of the study (Bleich & Pekkanen, 2015). It was also assumed that the sample from which faculty were selected made a conscious, intentional decision to register for the training on accessibility and universal design for learning (UDL). As the registration process required users to self-register and users can unregister from the training at any time, all users who remained registered despite their completion status were assumed to have intentionally registered for the training.

Assumptions regarding the faculty and data were also considered. One assumption was that faculty professional development is a crucial component of the research site. Researchers have concluded that faculty development can have a positive impact on teaching and learning, highlighting it as a critical component for researchers and institutions to understand more completely (Kennedy, 2016; Post, 2011; Wynants & Dennis, 2018). The last assumption was that there were systemic factors that both impeded and supported faculty participation in professional development in higher education. Prior research has already identified specific factors that may affect participation in faculty development in similar populations (Austin, 2011; Caffarella & Zinn, 1999; Gordan, 2018; Henderson et al., 2015; Powell, 2006; Sener & Hawkins, 2007; Sullivan et al., 2013; Wood, 2015; Zinn, 1997).

Limitations. The purpose of the research study was to understand the factors that supported and impeded the participation of a group of faculty in online faculty development at a specific institution. The sampling of faculty from a population of faculty who registered for the training may have indicated a higher level of internal or external motivation to complete professional development opportunities. The data were further limited to one year, as the accessibility and UDL training did not exist before that time. Therefore, the results of this study may not be representative of all faculty at the university. As a case study from a specific group of faculty at one large southern university, the results of this study are not generalizable to other populations, as neither the population nor the sample may be representative of all full-time instructional faculty. No generalizations should be made to other faculty, universities, higher education institutions, or geographic locations.

Researcher bias was considered a limitation to this research study. I have worked in education for more than eight years, with more than half of that time focused on professional development. I have also been employed at the study site for three years and continues to work in a capacity of faculty development. The benefit of utilizing this particular study site was that I was present at the institution during a unique time where an increased focus on student accessibility and online education occurred. Evaluating oneself as a researcher and oneself concerning the topic being studied was one way to combat researcher bias (Norris, 1997). Although the method of bracketing is standard in phenomenological research to compartmentalize prior experiences or researcher bias (Bhattacharya, 2017), the interpretive phenomenology method suggests a continuous reflection process by which one becomes aware of particular biases and utilizes this

information throughout the interpretation process (Cohen et al., 2000; Laverty, 2003). Throughout the data collection and analysis process, a research journal was used to identify conscious and unconscious biases.

Delimitations. The research participants were delimited to full-time instructional faculty at a four-year research university in the southern United States that registered for an online faculty development training on the topic of accessibility in course design between November 2018 and November 2019. The participants may not fully represent all faculty at the university or the larger population of faculty in the United States. A larger, more diverse sample may provide additional insight into the factors that affect participation in online professional development. The study was conducted to gather rich explanations of the factors affecting participation from this specific group of faculty, thus enabling their faculty developers to meet their needs better.

Organization of the Study

Chapter II, Literature Review, explores the complexity of adult learning in the context of higher education. The literature is conceptualized in four main areas: adult learning theory, professional development in higher education, faculty as adult learners, and system theory. These sections review faculty development from the macro to the micro-level—adult learning theory is the overarching theory that impacts faculty learning experiences in higher education professional development. The literature review reveals the interrelations and complexities of faculty development programming. In Chapter III, the phenomenological case study is presented as the research method for the study. A description of the procedure and data collection used for this study is detailed, including information on the setting, sample, data collection, procedure, and analysis. Chapter IV,

Findings, presents the participants' profiles and super-ordinate themes that were developed using the interpretative phenomenological analysis method. In conclusion, Chapter V, the findings are explained and discussed relative to prior research. Implications for practice and suggestions for future research are included.

CHAPTER II

Literature Review

Research on professional development in higher education reveals a stagnant trend of overly traditional development opportunities. Faculty development is primarily short, pedagogically-driven workshop opportunities on outdated topics (Beach et al., 2016; Sorcinelli et al., 2006). If faculty development is to bring about a change in faculty practice and attitudes, faculty need access to prolonged development designed to meet adult learning needs and preferences (Baldwin & Ford, 1988; Henderson et al., 2011; Manduca, 2017; Rienties et al., 2013). More modern professional development, such as sustained interaction in an online environment on topics specific and relevant to a variety of faculty, need to be offered. The predominance of research regarding online professional development is niched in preparing faculty to teach online courses (Herman, 2012). While that information is helpful and necessary, faculty developers and institutions of higher education need pragmatic research in offering quality online professional development for all instructional faculty.

The literature review was written to summarize approaches to adult learning, including faculty professional development, and discuss the role of instructional faculty and faculty development in institutions of higher education. The goal was to contextualize the faculty development that instructional faculty receive while also contextualizing instructional faculty in their role at institutions of higher education. The literature review is presented in three main sections: (a) adult learning theories, (b) faculty professional development, and (c) faculty in higher education. While the majority of faculty professional development is still designed using pedagogical methods (Meyer

& Murrell, 2014), the three most formulated adult learning theories are presented to understand the differences in adult and child education, specifically to highlight the disparities in how and why adults learn. Several topics relevant to faculty professional development, including design, topics, modes, and evaluation, are then presented. Faculty development is designed in a variety of modalities, theories, and topics. Although there has been a recent increase in online education (Allen & Seaman, 2007; National Center for Education Statistics, 2019), grounded, blended, and online modalities are discussed as all are frequently utilized for faculty development. The last section of the literature review presents a profile of faculty in higher education, with an emphasis on higher education culture and instructional faculty characteristics. As the profile of the faculty member changes, it is imperative that faculty development continuously evolves to meet their current needs. Faculty as learners are examined as a specific demographic of instructional faculty in higher education. Lastly, common barriers and catalysts of participation in faculty development are discussed. Common barriers to participation in online faculty development, including institutional structures, relationships, and intellectual and personal characteristics, are examined.

Adult Learning Theory

The history of and research regarding adult learning theory is rich. However, adult learning theories are widely underutilized by both educational practitioners and instructional faculty in continuing education and traditional degree programs (Meyer, 2014). Until the 21st century, our educational history has overwhelmingly supported a pedagogical, theoretical framework for all learners. Recent educational reform movements have accelerated attempts to provide more relevant learning to learners

(Aderinto, 2006; Elliott et al., 2015; Herman, 2012; Merriam, 2001a; Steinert et al., 2010). For professional development, the use of adult learning principles is the appropriate response to this reform when developing opportunities for instructional faculty. Also, as adults now constitute the majority of learners in colleges and universities across the United States (Chen, 2014; Lumina Foundation, 2019), a move beyond the traditionally applied theoretical framework in the college classroom is also warranted (Aderinto, 2006; Amstutz, 1999).

Adult learning theory was developed through many perspectives of early educational researchers. The earliest assumptions of adult learning can be traced back to Eduard C. Lindeman in the 1920s and 1930s. Lindeman's initial assumptions of adult learners were crucial to adult learning theories and specifically pivotal to the formulation of andragogy (Knowles, 1990b). Around the same time as Lindeman, Edward Thorndike developed his thesis regarding adult learning, which suggested age was a less significant predictor of learning success than other factors, such as interest, capacity, and time. Thorndike (1935) disagreed with other researchers who believed that adults lost interest in learning and were less able to learn as they age. Thorndike's thesis was confirmed through studies that scientifically supported adult learning and a difference in interests and abilities between adults and children (Sorenson, 1930; Thorndike, 1935).

One goal of adult education has never been solidified. Some (Amstutz, 1999; Mezirow, 2003) have suggested that the overall goal is to help learners recognize their abilities by providing opportunities to think critically about their assimilated values, beliefs, and assumptions, while others (Merriam, Caffarella, & Baumgartner, 2007) have argued that the goal is to prepare adults for the workforce. Despite the disagreement on a

goal, three primary models of adult learning have emerged since research regarding adult learning theory began in the 1800s. The emerging foundational theories of adult learning (American Institute for Research, 2011; Merriam, 2001b) include andragogy (Knowles, 1990b), self-directed learning (Tough, 1978), and transformational learning (Mezirow, 1997). Together, these three adult learning theories provide a foundation of adult learning principles: a holistic understanding of the adult learner; learning is more than acquiring and storing information; and the context in which adults learn is essential (Merriam, 2001b; Merriam et al., 2007). Although these characteristics are common among adult learning theories, advocates argued against the notion of one proper theory, as that was counter to the goal of customized learning (Chen, 2014; Snyman & van den Berg, 2018; Wilson & Kiely, 2002).

Educational scholars and critics have identified numerous concerns with the concept of adult learning theory, as well as each of the dominant models (Merriam, 2001a, 2018; Merriam et al., 2007). Although adult learning theory has been extensively studied by both advocates and critics, the need for a theory unique to adult learners has been widely called into question (Amstutz, 1999; Coulter & Mandell, 2016). Reproductions of Thorndike (1935) and Sorenson's (1930) studies to identify the presence of differences in interests and abilities between adults and children were primarily inconclusive (Beach et al., 2016; Courtney, Vasa, Luo, & Muggy, 1999; Karagiorgi et al., 2008; Kerka, 2002; Shaw, Conti, & Shaw, 2013). Further, the empirical research that culminated in the principles and assumptions of adult learning theory was not inclusive, thus perpetuating a white, male, middle-class ideal of what teaching and learning should look like (Baumgartner, Lee, Birden, & Flowers, 2003; Courtney, 2018).

Adult learning theory also lacked support for how the social aspects of learning affect learner success (Baumgartner et al., 2003; Mezirow, 2018; Sandlin, Wright, & Clark, 2013; Wright, 2013). Brookfield (1985) further criticized adult education researchers for furthering research fitting with their preferred method, rather than addressing issues identified in previous studies. Unable to resolve these concerns, empirical research into adult learning theory continued to be redundant and shallow for many years (Taylor & Cranton, 2013; Wilson & Kiely, 2002). Although the individual is still seen as a critical element in adult learning, adult learning theorists have now begun to shift their research to context-based learning, which has grown in popularity in the form of communities of learning (Merriam, 2018). The theories and practices of adult learning have been extensively applied to the field of human resource development (Ju, 2019; Knowles, Holton, & Swanson, 2005, 2015; Peltz, 2019; Swanson & Holton, 2009). Theorists are also incorporating more non-Western views of thought by investigating a holistic model of learning that involves an adult's emotions, body, and spirit (Merriam, 2018).

Andragogy. The term andragogy can be traced back to the 1800s, in Alexander Kapp's description of Plato's philosophical teachings (Knowles, 1990b). After being dormant for nearly 100 years, the term resurfaced in Reosenstock's 1921 article on philosophy and methods of adult education (Knowles, 1990a, 1990b). The late 1920s and the early 1930s were essential to the development of adult learning and education as they generated the first significant writings on the topic. These initial assumptions of adult learners suggested that maturity, not age, was the defining characteristic of the term "adult." Thorndike's studies in adult education supported Lindeman's views by revealing that age was a variable that had minimal effect on a person's ability or desire to learn

(Thorndike, 1928, 1935). It was also determined that teaching and learning resources should be dependent on learner interest and reflective of their life experiences (Lindeman, 1926). Knowles would later refine these early developments to construct his theory of adult learning, using Kapp's terminology, andragogy.

Knowles defined andragogy as a process model for teaching adults, who were defined by their ability to self-direct and be responsible for their own life (Knowles, 1990b, 1996; Knowles et al., 2005, 2015). Lindeman's writing influenced Knowles' original assumptions of andragogy that were developed in 1975 (Knowles, 1990b). As he refined the theory, Knowles expanded the assumptions from the original four to the most recent six assumptions (Knowles et al., 2005, 2015). The theory of andragogy is based on the following six assumptions of the adult as a learner: (a) adults need to understand the purpose of learning new information before they can learn it; (b) adults need to be treated as though they can self-direct their lives; (c) an adult's experiences affect one's learning process; (d) adults become ready to learn new information when they have the opportunity to apply the knowledge; (e) adults seek to gain information that is problem-centered and authentic; and (f) internal motivation is more effective than external motivation (Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015).

To transition andragogy from theory to practice, Knowles (1990b, 1996) outlined a facilitation process that, when used, effectively met the needs of adult learners by applying the six assumptions of adult learning. Early learning facilitators considered the transmission of content to the learner to be an appropriate educational approach (King, 1993; Lujan & DiCarlo, 2006). Further, the learning environment and instructional content were static regardless of the learner's experiences. Knowles' facilitation process

aimed to combat these outdated practices. In opposition to the popular content transmission model, andragogy was situated as a process approach, emphasizing the learner's ability to develop new skills as the facilitator guided the learning process (Knowles, 1990b, 1996; Knowles et al., 2005, 2015). The original process design included steps such as "(1) establishing a climate conducive to learning; (2) creating a mechanism of mutual planning; [and] (3) diagnosing the needs for learning" (Knowles, 1990b, p. 120). In 1995, Knowles' understanding of adult learners expanded when he discovered that not all adults were entirely self-directed. Therefore, the facilitation process was revised to include a new first step meant to prepare the learner to learn, which might include instruction on the difference between proactive and reactive learning, identification of resources and relationship building, and practice in proactive learning (Knowles et al., 2005, 2015).

When used as a process model, andragogy has been successful in various adult learning environments, including faculty development and university graduate programs (Culkin, 2018; Forrest & Peterson, 2006; Henning, 2012; Johnson, Wisniewski, Kuhlemeyer, Isaacs, & Krzykowski, 2012; Meyer & Murrell, 2014). Although the content transmission model has been prevalent among modern facilitators, faculty developers have recorded success in utilizing andragogy as a design method (Forrest & Peterson, 2006; Meyer & Murrell, 2014). Faculty developers who followed Knowles' andragogical principles created a more positive faculty development experience by providing more accessible and personalized training (Henning, 2012; Johnson et al., 2012). Likewise, practitioner-based and advanced professional graduate courses have benefited from the model, as instructors created an individualized approach for students

while teaching a standard curriculum (Carpenter-Aeby & Aeby, 2013; Leigh, Whitted, & Hamilton, 2015; Rapchak & Behary, 2013). Various early studies by Knowles (1990b) also supported the use of the andragogical model for younger students, which have been further confirmed (Akin & Asir, 2013). Research in cognition and neuroscience continues to validate the principles of andragogy (Hagen & Park, 2016; Knowles et al., 2015; Tainsh, 2016).

Though the success of andragogy has been reported in the literature, the majority of the research has either been anecdotal or qualitative. The lack of a single instrument to accurately measure the principles of andragogy has caused debate among researchers and is detrimental to the progression of the theory. Of the instruments that have been developed, the Andragogical Practices Inventory (Suanmali, 1981) was determined to be the most valid instrument by Holton, Wilson, and Bates (2009). Suanmali's inventory was developed based on previous work from Mezirow and measured a facilitator's support of specific adult learning principles. Henschke's (1989) Instructional Perspective Inventory was not reviewed by Holton et al. (2009) but has been validated in other studies and was eventually modified by Stanton (2005) into the Modified Instructor Perspective Inventory. Both the original and modified versions of the Instructor Perspective Inventory were designed to identify an instructor's beliefs regarding andragogical principles. Niksadat et al. (2019) developed and validated a 59 item Andragogy-based Patient Education Questionnaire for use in health sciences. To date, the research community has not yet accepted one valid psychometric instrument that measures the six assumptions of andragogy (Holton et al., 2009; Niksadat et al., 2019).

Despite the theory's success, the lack of a psychometric instrument to measure the principles of andragogy has limited its growth and has caused added criticism. Criticism regarding the theory of andragogy has been prevalent since the early days of the theory (French, 2019; Peltz, 2019; Pratt, 1993). Although andragogy was initially written as a model to replace the theory of pedagogy, Knowles' updated writings illustrated an understanding that both models are conducive to learners, and the appropriate model should be selected based on the situation (Knowles, 1990a, 1990b, 1996). Still, the theory has been criticized for being limited to the adult learner population (Merriam, 2001a). Pratt (1993) argued that andragogy expanded our understanding of adult education, yet he recognized that it had not always done so in an ethical manner. A lack of diverse research participants and application to marginalized communities has been a long-standing concern (Baumgartner et al., 2003; Merriam et al., 2007). Knowles et al. (2005, 2015) acknowledged the need for andragogy to meet the cognitive, personal, and experiential differences of all adults. Grace (1996) attacked Knowles personally and professionally for using andragogy to further individual learner needs rather than the needs of the society. Similar critiques regarding the social and cultural relevance of andragogy are still common (French, 2019; Peltz, 2019; Sandlin et al., 2013).

Substantial support and criticism for the theory have caused the field of education to split between supporters researching the origins of andragogy, as well as its practice in organizations across the world (Charungkaittikul & Henschke, 2018; Merriam, 2001a), and critics, who argued that the theory needed to contextualize further the importance of the learning environment (Merriam, 2001a). Further, the differences in andragogy among American and European cultures revealed additional divisions within the field. The

individual versus society as the central impetus for implementing andragogy is one such example of this division (Loeng, 2018). American andragogy struggled with the association between the learning process and the learner's environment (Loeng, 2018). Human resource developers have applied the principles of andragogy to organizations in an effort to generate both system and individual growth (Ju, 2019). Europe has embraced the views and practices of the theory much more quickly and completely. In European countries, in which the field was widely accepted after World War II, andragogy was established as its science and academic discipline and used to refer to the professional field of adult education (Loeng, 2018; Merriam, 2001a). In the years since Knowles' initial writings, the original principles on andragogy have been expanded (Knowles et al., 2005, 2015). Appreciative andragogy is one instructional strategy developed by joining andragogy and appreciative inquiry for developing motivation, engagement, and performance of online learners in higher education (Johnson, 2014). While andragogy is only one model of educating adults, additional research and commentary regarding the most criticized components of the adult learning theory will aid the entire field.

Self-Directed Learning. Knowles recognized that adults were self-directed learners: he used self-direction as a way of defining adulthood and initiating learning when applying the principles of andragogy (Knowles, 1975, 1990b; Knowles et al., 2005). Although self-directedness is part of Knowles' andragogy, researchers have also developed a theory specifically to study self-directedness. Houle's typology of professionals and cycle of learning developed early in the study of adult education were foundational pedestals for the theory of self-directed learning. Houle (1961) posited that individuals participating in continuing education would fit best into one of three

overlapping groups: goal-oriented, activity-oriented, or learning-oriented participants. Goal-oriented individuals would participate in continuing education when the need arose; their participation was more sporadic than the other groups. A desire to be social or to engage in an activity characterized the participants in the activity-oriented group. Their purposes for participation were primarily unrelated to the actual educational activities. Lastly, learning-oriented participants were the most different of the three groups. Learning-oriented individuals had been interested in learning from a young age and were consistently involved in educational experiences. Houle's research was partially confirmed in the 1980s when Boshier and Collins (1985) utilized over 13,000 learners from five countries in an attempt to corroborate the typologies. Boshier and Collins determined that although Houle's findings may have been overly simplified, his original typologies, among other more sophisticated typologies, were evident in the cluster analysis. Later, through their study of a large sample of Chicago nurses, Cervero and Dimmock (1987) would find Houle's typologies to be valid.

The typology of professionals paralleled Houle's cycle of lifelong learning that maps a person's learning journey in stages from pre-natal to senescence (Houle, 1974). In Houle's cycle, the onset of maturity began after adolescence, and several stages of adulthood follow (Houle, 1974). Early middle age, typically from the ages of 35 to 45, is a particularly important time of education as changes in career paths or new interests often provided a need for further learning at this age (Houle, 1974). Consequently, Houle's original typologies were a suggestion that learners in the goal-oriented and activity-oriented groups typically did not participate in adult education until their middle-twenties or even much later (Houle, 1961). Learning-oriented individuals, however, did

not follow this pattern, as they were engaged in learning from a younger age (Houle, 1961). The correlation between age, changes, and education during an adults middle life indicated to Houle that three specific elements were important to facilitate adult participation in continuing education: "the recognition of a need or an interest, the will to do something about it, and the opportunity to do so" (Houle, 1961, p. 56-57). By the time adults entered the later middle stage of their life, they had tended to lose interest in and the need for education (Houle, 1974). Later, Rowland and Volet (1996) published that learners perceive self-directed learning differently in various stages of learning.

Focused solely on self-direction in the adult learning process, Tough (1978) called for expanded research into self-directed learning as a theory within the field of adult education. Tough's research into self-directed learning indicated that adults spent a great deal of time actively learning, but not the way one might expect. Surveys of adult populations in the 1970s revealed that, on average, adults took part in five learning efforts a year, which was representative of approximately 10 hours a week of learning (Tough, 1978). However, formal education was one of the least common ways that adult learners were engaged (Tough, 1978). Eighty percent of the learning efforts identified were informal learning, defined as learning organized by the learner or a group of learners (Tough, 1978). Adults appeared internally motivated to create or participate specifically in informal learning because the information was directly relevant to a skill or knowledge that they required (Tough, 1978). Participants in several of these studies indicated a desire for the individualized approach that is possible through the informal model, such as working at their own pace, setting their schedule, and utilizing their preferred learning style (Tough, 1978). Tough's research mainly focused on the deciding and planning

elements of adult learning, but it helped pave the way for future researchers to expand the theory (Brockett & Hiemstra, 1991).

There are three main principles of self-directed learning. First, learning goals will differ depending on the learner. Second, transformational learning, reflection by the learner about learning, is critical and should be facilitated by educators. Third, self-directed learning should incorporate the social and environmental aspects of learning (Baumgartner, 2001; Merriam, 2001a; Merriam et al., 2007). The principles of self-directed learning were intended to promote widespread, systematic learning throughout adulthood, as opposed to learning isolated to an instructor or a classroom (Merriam, 2001a). In his systematic review, Owen (2002) summarized that many researchers agree that the purpose of self-directed learning included "(a) learning for adaptation to and the transmission of culture, (b) learning for the understanding and development of expertise or specialist knowledge, (c) learning for the vitalization of organizations and societies, and (d) learning for personal fulfillment" (p. 10).

Achieving a single, unified definition of self-directed learning has been difficult as researchers within the field view the theory from different lenses. Difficulty in developing a definition for the term self-directed learning originated from the semantics between *learning* and *education*. One unifying characteristic was that self-directed learning is differentiated from traditional, formal education through the independence of the learner (American Institute for Research, 2011; Caffarella, 1993). Knowles' definitions of self-directed learning are most well-known, as he identified self-direction as a critical component of adult learning in his theory on andragogy. However, he utilized the term to indicate both a learner characteristic and a process for learning. In

Knowles' andragogy, self-direction was listed within the fourth tenet (Knowles, 1990a, 1990b, 1996; Knowles et al., 2005). Later, when Knowles wrote exclusively on self-directed learning, around the time of Tough's empirical research, he defined it as a process whereby individuals take ownership of their learning by determining the need, identifying goals, locating resources, choosing and applying learning strategies, and evaluating the outcome (Knowles, 1975). As Brookfield (1986) summarized, the term learning should have been reserved for the internal processes that occur as a result of external conditions. Therefore, the method that Knowles defined should have been termed self-*education* (Brookfield, 1986). Brockett and Hiemstra (1991) also recommended *self-direction in learning*. As the field continued to grow and expand, researchers have continued to investigate self-directed learning as both a process and an adult characteristic (Brockett & Hiemstra, 1991; Knowles, 1990b; Merriam et al., 2007; Owen, 2002).

Linear and interactive process models of self-directed learning theory are typical in the theory's history. Tough and Knowles developed the first linear process models for self-directed learning theory in the early stages of the theory. Tough's (1967, 1971) model included twelve main tasks that focused on learner decisions regarding their process, themselves, and their barriers. Knowles (1975) provided a strategy for learner success, starting with the climate and ending with evaluation. It is not evident that Knowles viewed self-directed learning and andragogy as two separate theories, as the same process was also later published in updated writings on andragogy (Knowles, 1990b; Knowles et al., 2005). Other researchers disagreed with the linearity of Toughs' and Knowles' models, and therefore, developed more fluid examples of self-direction.

Brockett and Hiemstra's (1991) Personal Responsibility Orientation (PRO) model solidified their use of the term self-direction in learning to refer to self-directed learning theory. Unlike most other models, PRO combines instructional methods and learner characteristics to foster self-direction. Stockdale and Brockett (2011) developed and validated the SDLS-PRO instrument to measure self-directedness in the PRO model, which has now been used to measure the self-directedness of undergraduates (Duarte, Leite, & Mouraz, 2016) and adult learners (Amos & Gwendoline, 2019) in higher education. Similarly, Garrison's (1997) model showed self-directed learning as a motivational approach emphasizing the relationships between self-motivation, monitoring, and management. In Garrison's view, self-directed learners self-manage and self-monitor to achieve meaningful learning outcomes, either independently or in collaborative learning environments (Garrison, 1997; Garrison & Akyol, 2015).

Self-direction as a learner characteristic has mostly been written about and studied in terms of readiness, a psychological state in which self-directed learning can begin (Merriam et al., 2007). The Self-Directed Learning Readiness Scale (SDLRS) was the first instrument widely available to measure a learner's readiness to engage in self-directed learning activities (Guglielmino, Guglielmino, & Long, 1987). Brockett (1985) and Brookfield (1985) both called into question the usability of the instrument itself, stating that many items were unclear or irrelevant to the samples being tested. Brockett's (1985) critique also questioned the results of the scale, arguing that the self-reported nature of the instrument measured perceived readiness to self-direct instead of actual self-directed behaviors. However, the instrument's reliability and validity have been evaluated (Zhoc & Chen, 2016), and vast empirical research utilizing Guglielmino's

instrument has determined positive correlations between self-directed learning readiness and other assessments, such as academic performance, future aspirations, creativity, curiosity, and life satisfaction (Edmondson, Boyer, & Artis, 2012; Hamilton, 2018; S. Wagner, 2018). Self-efficacy and locus of control have also been correlated with self-directedness in traditional and non-traditional online students (Plews, 2017) and academic professors (Ponton, 2018). Another relevant instrument is the Oddi Continuing Learning Inventory (OCLI), primarily utilized to study continuing education (Merriam et al., 2007). The Oddi Continuing Learning Inventory measures self-directedness as a personality trait (Oddi, 1986). Owen's (2002) systematic review identified empirical studies that correlated more than 25 variables with self-directedness through the OCLI, and Harvey, Rothman, and Frecker (2006) confirmed Oddi's (1986) three-factor model.

There is a general lack of empirical research on self-directed learning (Chen, 2017). For faculty developers, self-directed learning has been the second most frequently applied learning theory used to develop professional development for faculty in higher education, according to Meyer and Murrell (2014). Phuong, Duong, and McLean (2015) reported that self-directed learning was the most frequently used faculty development in Asian higher education. Faculty development designed using principles of self-directed learning has been shown to enhance faculty learning and the learning environment (Pololi et al., 2001; Samaras, Hjalmarson, Bland, Nelson, & Christopher, 2019). However, adult learners have historically chosen informal learning over organized programming (Courtney, 2018; Tough, 1978), and researchers has indicated that faculty engaging in informal self-directed learning, such as self-study (Matsumoto, 2016) and conversations with peers (McCune, 2018; Thomson & Trigwell, 2018), benefit from this targeted

development. The informal process of self-directed learning benefits from the help of educators and developers, as Tough (1978) discovered that adults were often unsure about how to begin their learning effort, set a schedule, and measure their learning. Self-directed learning has been illusioned as an isolated activity, but in fact, self-directed learning cannot possibly be isolated learning, as all learners engage with resources, individuals, or technologies developed for learning (Brockett & Hiemstra, 1991; Brookfield, 1985; Chen, 2017). However, all faculty may not be interested in developing identifiable goals related to teaching and learning (Gegenfurtner, 2019; Kreber, Castleden, Erfani, & Wright, 2005). Instead, faculty may be more likely to develop goals related to their subject matter (Kreber et al., 2005) or promotion (Rogach, Frolova, & Ryabova, 2019).

Knowles' (1975) inclusion of self-directed learning as a leading principle in his theory of andragogy escalated self-directed learning to a pivotal place in the field of adult education (Amstutz, 1999). As such, the major criticisms of the self-directed learning model echo those of adult learning in general. Brookfield (1984) critiqued the many studies that followed and helped validate Tough's research. Specifically, Brookfield identified a lack of diverse research participants, the use of strict research measures, the ignorance of learning in social contexts, and a lack of action from society and politics. Brockett and Hiemstra (1991) disagreed that the research revealed a lack of diversity, citing over fifteen research studies that included black participants. Other authors criticized empirical works for ignorance of the social and physical environments in which learning occurs (Rowland & Volet, 1996). As with andragogy, Tough's and Knowles' self-directed learning models were criticized for being too linear (Merriam, 2001a).

Recent research into self-directed learning has focused on students in higher education (Amos & Gwendoline, 2019; Duarte et al., 2016) and the use of self-directed learning in collaborative learning environments (Garrison & Akyol, 2015). Further research in self-directed learning can impact our understanding of motivation and the learning process.

Transformational Learning. Transformational learning is arguably the most pivotal type of learning that an adult may undergo. Transformational learning changes how adults know the information they encounter (Baumgartner, 2001). The Transformative Learning Centre at the Ontario Institute for Studies in Education developed an encompassing definition of transformational learning:

> Transformative learning involves experiencing a deep, structural shift in basic premises of thought, feelings, and actions. It is a shift of consciousness that dramatically and permanently alters our way of being in the world…It also involves our understanding of power relations in interlocking structures of class, race and gender, our body awareness, our visions of alternative approaches to living, and our sense of possibilities for social justice, peace and personal joy. In sum, transformative learning makes us understand the world in a different way, changing the way we experience it and the way we act in our day-to-day lives. Transformative learning has an individual and a collective dimension and includes both individual and social transformation.
>
> (https://www.oise.utoronto.ca/tlcca/About_The_TLC.html, para 3-5)

The concept of transformation through learning became popular after Freire's *Pedagogy of the Oppressed* (1970). Freire (1970) sought to unravel harsh political and social issues of his time by arguing that the oppressed needed to initiate education, action,

and reflection to bring about changes within themselves and the system. Habermas' (1984) research on the theory of communication was also critical to the development of the adult learning theory. Habermas (1984) argued the background and context of speakers and hearers significantly affected how humans interpret communication. Humans make meaning of new experiences by associating the experience with specific images and symbols that are then given some level of value and feeling (Mezirow, 1995). People are able to understand conversations with one another through the application of a collective meaning to a symbol. Communicative learning (as described by Habermas) is, therefore, the process of individuals gaining a mutual understanding of what is being communicated (Mezirow, 1996, 2018). For a symbol to have meaning, humans must apply their "frame of reference, set of schemas, worldview, or personal paradigm" to it (Mezirow, 1995, p. 42). The human frame of reference is the target for transformation during transformational learning, as it governs a person's belief systems, understanding, and communication processes. Further, the social aspect of communicative understanding is imperative to transformational learning theory as transformational learning is not an individualized activity, but a collaborative relationship between the learner and others often used to change group culture and practices (Baumgartner, 2001; Choy, 2009). Deep reflection enables the process of assigning or reassigning meaning to words, thoughts, and actions already in a person's vocabulary and is at the core of transformational learning theory (Mezirow, 2000). Mezirow's (1996) transformational learning model illustrates the intersection of Freire's and Habermas' ideas as he suggested that "through critical reflection, we become emancipated from communication that is distorted by cultural constraints" (p. 165).

Mezirow's research into transformational theory began with a nation-wide study of women returning to community college after a significant period away (Mezirow, 1991). His study highlighted the complex processes that occurred when trying to create transformative behavior. Mezirow's theory centered on the belief that the learning process is managed by frames of reference. As adults go through life, they gather experiences, which mold their thoughts, beliefs, and values (Knowles et al., 2005; Mezirow, 1997). When entering new learning environments, these previous experiences and understandings are transferred and become an adult's frame of reference (Mezirow, 1997). Humans develop frames of reference from their culture and environment, and the frames are used to structure how we understand our lives and the world around us (Mezirow, 1997, 2018). These frames are further integrated into life through habits of mind that are difficult to change and points of view (Mezirow, 1997, 2018). Habits tend to be social and cultural ideas that influence thinking, which eventually develop into points of view, the core beliefs, judgments, and feelings that we associate with particular meanings (Mezirow, 1997).

Changes to frames of reference can occur through four different learning processes. Learners may seek further evidence for their current point of view, establish a new point of view, transform a point of view, or change the habits of mind (Mezirow, 1997). Although points of view can change quite frequently, changes to the habits of the mind are unlikely to happen unless the learner is uncomfortable with the existing frame of reference (Mezirow, 1997). For a learner to transfer new knowledge into a current frame of reference, the learner must critically reflect on the thoughts, beliefs, and assumptions that initially created the frame of reference (Mezirow, 1997, 2018; Rusch &

Brunner, 2013). From his study, Mezirow (1991) identified a ten-step process by which adults transformed:

1. A disorienting dilemma
2. Self-examination with feelings of guilt or shame
3. A critical assessment of epistemic, sociocultural, or psychic assumptions
4. Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change
5. Exploration of options for new roles, relationships, and action
6. Planning a course of action
7. Acquisition of knowledge and skills for implementing one's plans
8. Provisional trying of new roles
9. Building of competence and self-confidence in new roles and relationships; and
10. A reintegration into one's life on the basis of conditions dictated by one's new perspective (pp. 168-169).

During the process, the responsibility of learning was shifted from the educator to the learner to create a space in which learners began to act on their values, feelings, and meanings, rather than on the values of others (Mezirow, 2000). Therefore, self-reflection was also critical to changing habits of mind and points of view (Merriam, 2001a; Mezirow, 1997, 2018). Whether gradual or sudden, transformational learning was an effective process for the learner, as it changed how the learner viewed themselves and the world (Baumgartner, 2001; Choy, 2009; Lari, 2008).

Like other theories of adult learning, transformational learning theory was initially visualized as a linear model with a single exegesis. Updated versions of the adult

learning theory are more individualized and fluid, with some components indicated as more critical than others, such as the ability to work through feelings and a focus on society (Baumgartner, 2001; Taylor, 2008, 2011). Tisdell's (1998) psychological model of feminist pedagogy, for example, expanded Freire's (1970) work by focusing specifically on the oppression and emancipation of women. The field of adult education has always emphasized the importance of experiences in adult learning, but the emphasis on gender is specific to feminist pedagogy (Tisdell, 1998). Tisdell's (1998) theory is a natural accompaniment to the field of adult education and, more specifically, transformational learning, as it highlights the connections between a person's identity and social structures while also analyzing the relationship between human emotions and their rational thoughts in the world. O'Sullivan's (2005) model viewed education as a spiritual journey and advocated for more strange attractors in school systems, such as art, drama, outdoor activity, hope, etc., as opposed to the common focus on high stakes testing and other components used for marketability. His strange attractors were creative features meant to save the system from complete ruin (O'Sullivan, 2005). Lastly, Dirkx's (2000) model, which is similar to Mezirow's, acknowledged that learning experiences provide opportunities for adults to correlate meaning to images and emotions. Through these experiences, adults can become aware of the images and their meaning, creating a more cohesive learning environment (Dirkx, 2000). Although more modern transformational learning models are available, Mezirow's model has been consistently seen as the dominant transformational learning model throughout the literature (Taylor, 2008).

Despite extensive research, discussions regarding the theory, and newly developed models, critics claimed the theory has not progressed as an adult learning

model (Newman, 2012; Taylor & Cranton, 2013). Similar to other adult learning theories, Mezirow's (1991) empirical research, which produced the theory of transformational learning, was criticized for lack of diversity, as it was developed from mostly female participants in the 1970s (American Institute for Research, 2011; Newman, 2012). Therefore, the model is likely skewed to represent a single adult population. To combat the lack of diversity, Nohl (2015) interviewed eighty men and women from a variety of social, educational, and age groups. In contrast to Mezirow's initial theory, Nohl (2015) argued against the need for a disorienting event, finding instead that the event that eventually leads to the transformation of the individual was normal and casual. Nohl's ideas mirror earlier criticism from Clark and Wilson (1991), who declared that although experiences are important to transformational learning, Mezirow did not effectively explain the connection between these experiences, their context, and subsequent interpretation by individuals. Newman (2012) further argued against the need for the theory claiming that transformational learning is not a separate idea from exceptional learning because all learning includes some change. Others (Hoggan, 2016; Lari, 2008; Sandlin et al., 2013) countered Newman's thought by arguing that transformational learning was a more personal and significant learning experience. However, Sandlin et al. (2013) objected to Mezirow's linear process, claiming that a linear process was not reasonable in practice, where adults moved more fluidly through a learning transformation. In an update on the transformational learning theory, Mezirow (2018) identified several major issues with the theory, including a lack of emphasis on (a) the role of emotions in transformational learning; (b) social change; and (c) the learning context, including gender, race, and power.

The volume of research studies regarding transformational learning has increased the model's popularity (Merriam, 2018; Taylor, 2008; Taylor & Cranton, 2013). However, transformational learning was one of the least used learning theories when designing professional development for faculty in higher education (Meyer & Murrell, 2014). Taylor's (1997) review of empirical studies of Mezirow's model revealed a lack of studies with higher education faculty as the primary population. In 2007, Taylor updated his findings, which revealed that higher education was one of the most popular research sites for researchers investigating the fostering of transformational learning, but progress on the theory has since slowed (Taylor & Laros, 2014).

Despite the increase in related studies, research in applying transformational learning to change faculty attitudes towards technology use and pedagogy has not been positive (Whitelaw, Sears, & Campbell, 2004). Whitelaw et al.'s (2004) study indicated that although changes to the faculty members' perspectives were possible, perspective changes did not correlate to changes to their practice in all cases. However, McQuiggan (2012) implied that professional development for online teaching designed using transformational learning principles was able to change the beliefs, attitudes, and face-to-face teaching practices of faculty members. The time that faculty spent engaging with professional development appeared to be associated with how much of a change was made (McQuiggan, 2012). Through her longitudinal study of HIV/AIDS patients, Baumgartner (2002) confirmed Mezirow's (1991) research regarding the permanent nature of transformations, making transformational learning a powerful professional development method. With a significant shift from grounded to online education, faculty

may need to transform their teaching practices to be comfortable with online teaching (Jacobs, 2013).

Unlike other adult learning theories that are highly dependent on the learner, transformational learning can be facilitated in any environment, as the success of transformational learning is more dependent on the course design, facilitators, and the learners (Christie, Carey, Robertson, & Grainger, 2015; Hoskins, 2013). Adult learners seek professional development to satisfy a short-term goal or immediate need (Mezirow, 1997; Tough, 1978). Adults are efficient about their education, utilizing their social contexts to aid in gaining prior experience for what is necessary and relevant to their lives (Snyman & van den Berg, 2018; Wlodkowski & Ginsberg, 2008). Courses for adult learners that use adult learning principles as considerations for design, such as transformational learning, provide environments for adults to grow emotionally and cognitively (Chen, 2014).

Professional Development in Higher Education

Faculty professional development at institutions of higher education began as sabbatical leave at Harvard in 1810 (Lewis, 1996). Until the 1960s, faculty professional development only included sabbatical leave, research, or gaining advanced degrees (Lewis, 1996; Sorcinelli et al., 2006). In the history of faculty development, this period was known as the Age of the Scholar because the focus of development was on the improvement of academic research rather than the growth of teaching and learning (Beach et al., 2016; Sorcinelli et al., 2006). Institutions provided faculty with paid leave and travel, but there was an overall lack of organized development activities available to faculty from the institution itself (Sorcinelli et al., 2006). Student and parent protests

during the 1960s and 1970s targeting the course and teaching quality in higher education brought to light the fallacy that subject matter knowledge provided the skill necessary to teach effectively (Lewis, 1996). The initial response from institutions was to lower the instructor/student ratio, recruit new faculty, and purchase the latest technologies (Bergquist & Phillips, 1975; Sorcinelli et al., 2006).

A recession and a decline in postsecondary education in the 1970s made it difficult for faculty members to move between institutions (The Group for Human Development in Higher Education, 1974; Lewis, 1996), which contributed to faculty burnout and poor working conditions throughout institutions in the 1980s (Lewis, 1996). As a result of the student advocacy for quality education in the prior years, professional development initiatives responded to the need to increase quality education with the Age of the Teacher (Beach et al., 2016; Sorcinelli et al., 2006). Faculty development during the time had an increased emphasis on training professors to teach their subject matter, a shift from the focus on research and content in the 1960s. To support this new focus, teaching and learning centers began to open at universities, and grants and foundations were formed with a specific interest in faculty development for teaching and learning (Sorcinelli et al., 2006). A review of teaching and learning center titles in the 1970s reveals "development" was the most frequently included word, followed by adjectives such as "educational," "instructional," and "faculty," indicating that these departments provided resources focused on teaching and learning (Crow, Milton, Moomaw, & O'Connell, 1976). The definition of faculty development also began to broaden during this time to include personal and career development (Crow et al., 1976; Lewis, 1996; Schuster et al., 1990). Bergquist and Phillips' (1975) seminal work on professional

development proposed the expansion of faculty development to include organizational, personal, and instructional development.

The 1980s marked the Age of the Developer due to the increase of teaching and learning centers across higher education, which meant a rise in individuals needed to employ the centers, commonly known as faculty developers (Beach et al., 2016; Sorcinelli et al., 2006). The University of Michigan and the University of Massachusetts helped spearhead the inclusion of faculty development by opening teaching and learning centers during the 1970s and 1980s (Centra, 1978; Lewis, 1996). In approximately thirty years, faculty professional development went from relatively non-existent at United States colleges and universities to over one-half of institutions, including some form of faculty professional development on their campus (Lewis, 1996; Sorcinelli et al., 2006). That number has steadily increased (Fink, 2013; Lewis, 1996). The rise in faculty developers and teaching and learning centers allowed for faculty development to become a collaborative activity between developers and faculty, but also between faculty and their peers (Beach et al., 2016; Sorcinelli et al., 2006).

The culture of teaching and learning began to shift around 1990. The learner became the center of the learning experience, and consequently, this period was known as the Age of the Learner (Beach et al., 2016; Sorcinelli et al., 2006). The growth of educational technology provided learners with a new learning experience and also equipped faculty with new skills to master. University professional development units grew exponentially to meet the demand for rewarding and promoting best practices in teaching and learning. Additionally, developers realized the need to support faculty

members at the start of their careers, ushering in a trend of development specifically for young graduate assistants, Ph.D. students, and novice faculty (Sorcinelli et al., 2006).

The belief that knowledge in the subject matter equated to a knowledge of teaching the subject matter dominated the early days of faculty development (Gyurko et al., 2016). Throughout the last forty years, the focus of faculty development has continued to shift and morph. Now, in the Age of the Network, institutions are required to work collaboratively to meet the demands of stakeholders, both internal and external (Beach et al., 2016; Sorcinelli et al., 2006). Throughout the last decade, researchers have identified an increase in community learning, blended professional development, and the use of adult learning design principles as trends in professional development (deNoyelles, Cobb, & Lowe, 2012). However, it is not clear if universities and colleges are responding to these trends, as professional development has remained overly traditional (Karagiorgi et al., 2008) and has not been an institutional priority (Gyurko et al., 2016). While an emphasis on professional development goals related to organizational change has increased, the main goals of faculty developers in higher education have been stagnant for over ten years (Beach et al., 2016). Faculty developers in higher education have continued to focus on sustaining and advancing initiatives in teaching and learning or addressing individual faculty needs (Beach et al., 2016).

The entire landscape of higher education institutions has changed drastically since the emphasis on online learning. A large amount of tenured and tenure-track positions at institutions have given way to adjunct and contract professors (Gyurko et al., 2016; Kezar & Maxey, 2014; Shattuck et al., 2011). The traditional out-of-high school students have been replaced by adults and non-traditional students (Chen, 2014; Lumina Foundation,

2019). Further, enrollments in online education have increased for fourteen straight years, and the trend is expected to continue as more and more institutions join the online space (Seaman, Allen, & Seaman, 2018). As a result of these changes in higher education, there has been a great need for accessible, evidence-based, teaching-centered faculty development in higher education (Wynants & Dennis, 2018). The rise in adjunct faculty members revealed a need for specifically online professional development (Gyurko et al., 2016; Shattuck et al., 2011). The topics and modalities of faculty development also need to reflect the concerns of faculty who are teaching non-traditional students in an online environment. Faculty professional development can be presented in an abundance of traditional and innovative modes, including intensives, short courses, learning communities, seminars, MOOCs, or online courses. Decades of research regarding the effectiveness of online education have resulted in the conclusion that no significant differences between grounded and online modalities exist for the learner (Cook & Steinert, 2013; Wright, 2014). Likewise, a few studies (Fishman et al., 2013; Hathaway & Norton, 2012) have identified no significant difference in the learning outcomes of professional development in different modalities.

Topics of Faculty Development. The main goal of faculty development at research institutions is to sustain and advance initiatives in teaching and learning or address individual faculty needs (Beach et al., 2016; Meyer, 2014). Bergquist and Phillips (1975) recommended that effective faculty development programs should include training in organizational development, instructional development, and personal development. There is not a clear separation between these three categories, as each category has the potential to positively or negatively impact the others (Gillespie, 2010).

As shown in Figure 1, Grupp (2014) highlighted the complexity of faculty development in higher education by showing the connections between the three main initiatives of teaching and learning centers. Schuster et al. (1990) argued that for faculty development to be effective, offerings needed to focus on all three categories. Gaff's (1975) model of effective faculty development programs differed slightly from Bergquist and Phillips' (1975) in that faculty development was substituted for personal development. Baran and Correia's (2014) faculty development framework for online teaching also took a holistic approach, including organization, community, and teaching as three interconnected factors needed for successful development. Sorcinelli et al. (2006) and Beach et al. (2016) confirmed that faculty development in the areas of organizational and instructional development is common among modern institutions. However, a lack of diversity in the opportunities offered by institutions can make it difficult for some faculty to find opportunities that meet their needs (Caffarella & Zinn, 1999; Brownell & Tanner, 2012; Dailey-Hebert, Mandernach, Donnelli-Sallee, & Norris, 2014; Gordan, 2018; Post, 2011; Powell, 2006; Sullivan et al., 2013). Centralized teaching and learning centers may expand the issue of development opportunities that do not meet individual faculty needs (Levinson-Rose & Menges, 1981; Meyer, 2014). Personal development is mostly missing from the faculty development literature (Brinthaupt, Neal, & Otto, 2016).

Figure 1. Roles and responsibilities of faculty developers based on POD network model by Grupp. Adapted from "Faculty Developer as Change Agent: A Conceptual Model for Small Institutions and Beyond," by L. L. Grupp, 2014, *Journal on Centers for Teaching & Learning, 6*, p. 47. Copyright 2014 by Journal on Centers for Teaching & Learning. Reprinted with permission (Appendix A).

Organizational development includes topics that are specific to the success of the entire institution (Addleson, 2018; Baron, 2006; Gillespie, 2010). In recent years, the emphasis on faculty development offerings to bring about organizational change has increased (Beach et al., 2016). Organizational development is highly dependent on

relationships and learning contexts (Addleson, 2018; Gillespie, 2010). There are several layers to relationships, including personal relationships between employees, as well as the relationship between cause and effect of policies or changes (Addleson, 2018; Gillespie, 2010). The context is also vital in organizational development, as any decisions could have a substantial impact on the functionality of a multitude of other moving parts (Addleson, 2018; Gillespie, 2010). Each interaction within an organization has a distinct effect on the functionality, stability, and accessibility of the organization and its stakeholders (Gillespie, 2010). Therefore, it is important to clearly understand the environment in which we are working if institutions are to live out the mission of making a difference in the lives of faculty and students (Austin, 2010). Training topics that may be included under the category of organizational development include management or leadership training, processes, organizational change, and governance (Gillespie, 2010). Information regarding the tenure and reappointment processes is a topic that is specifically important for new career faculty members (Austin, 2010). Gillespie (2010) also suggested that stakeholders be informed about the data, trends, and policies that were affecting the institution, but also higher education as a whole. Campus-wide initiatives such as accreditation (Zakrajsek, 2016), student retention, diversity, technology integration, and community engagement are some examples that would provide an opportunity for faculty to become more involved and knowledgeable about the institution and the system of higher education (Baron, 2006; Grupp, 2014). Campuses should be offering opportunities related to assessing learning outcomes and course and curriculum reform (Beach et al., 2016; Phuong et al., 2015). Previously, evaluating learning outcomes and student diversity were the most commonly offered organizational

development topics (Sorcinelli et al., 2006). Topics that would help promote diversity across campus include multicultural issues in specific academic contexts (Grupp, 2014), classroom differences (for example, aspects of student identity, preparation level, and styles of learning), the transformation of course content, and management of instructor identity and authority in the classroom (Cook & Marincovich, 2010). Leadership training, such as chairperson training and administrative or management internships, are crucial to the overall organizational health and stability (Hubbard, Atkins, & Brinko, 1998).

Traditionally, faculty development opportunities have targeted specific faculty populations and teaching environments (Herman, 2012). Instructional development was meant to provide faculty with strategies to impact student learning (Taylor & Colet, 2009). Institutions of higher education assumed that an expert in the discipline was equally an expert in teaching the subject (Gyurko et al., 2016; Henley & Magelssen, 1990; Kane et al., 2002; Weimer & Lenze, 1997). The research confirmed, however, that colleges and universities tended to hire faculty who have little to no experience or training in teaching (Elliott et al., 2015; Kane et al., 2002; Weimer & Lenze, 1997). The skills and knowledge that faculty required to perform teaching, research, and service responsibilities were often not fully developed during graduate programs (Austin, 2010; Saroyan & Trigwell, 2015). Accordingly, orientations, workshops, and learning communities focusing on teaching and learning and training in new skills were needed to meet faculty needs (Austin, 2010; Hubbard et al., 1998; Zakrajsek, 2016). Tenure-track and non-tenure-track faculty members felt that topics relevant to them were not prioritized despite interest from instructors (Gyurko et al., 2016; Hott & Tietjen-Smith,

2018). Further, supporting part-time and adjunct faculty, the changing roles of faculty, and balancing faculty positions were important professional development topics that were not widely addressed (Sorcinelli et al., 2006). Sorcinelli et al. (2006) review of topics perceived as essential by faculty developers and Steinert et al. (2016) review of the development offered to medical professionals from 2002-2012 found the offerings to be overwhelmingly situated in instructional development. The most critical professional development for instructors is in the areas of technology, student learning, and teaching experience (Grupp, 2014; Phuong et al., 2015; Wallin, 2003). Technology integration and active learning strategies were the most common topics related to teaching and learning provided by centers (Beach et al., 2016; Grupp, 2014). These topics were similar to previous findings. Sorcinelli et al. (2006) published that teaching and learning centers increased development opportunities near the turn of the century related to technology use and integration and active learning strategies. However, it may have been more beneficial for teaching and learning centers to focus on teaching innovation rather than remediation of faculty instructional techniques (Cook & Marincovich, 2010). Programming should have included modern research-based practices rather than a focus on general teaching practices, which is not an effective use of programming (Cook & Marincovich, 2010; Saroyan & Trigwell, 2015). Centers also had an opportunity to facilitate a union between faculty research and teaching (Cook & Marincovich, 2010; Saroyan & Trigwell, 2015).

Instructional and organizational development were not enough to support faculty members in their careers (Hubbard et al., 1998). New faculty orientation was the most common faculty work and career development topic offered by universities in the United

States (Beach et al., 2016). Teaching and learning centers should investigate how to provide more holistic faculty development, including topics related to personal development (Beach et al., 2016; Brinthaupt et al., 2016). Although this practice was common in corporate and medical school settings, research on the personal development services that were offered to faculty at institutions of higher education is limited (Brinthaupt et al., 2016). One reason for the lack of research in this area maybe that mental and physical health services are often decentralized from each other, and even further removed from organizational or instructional development services, making it difficult to assess the need for overlap (Hubbard et al., 1998). Hubbard et al. (1998) reported that faculty often attributed a lack of success in the classroom to personal concerns rather than lack of knowledge in teaching methods. Their research indicated that faculty needed personal support and development to ensure faculty vitality. Suggested development opportunities to address faculty mental health included depression, adjustment problems for new faculty, divorce, and bereavement (Hubbard et al., 1998). Physical health was also an important component and should have been addressed in the form of stress management, improving eating and exercise habits, and work-life balance (Brinthaupt et al., 2016; Hubbard et al., 1998).

A logical connection between the programs provided at an institution created a network of resources and a learning pathway for the faculty that was essential to supporting lifelong learning (Manduca, 2017). This logical connection should also include the institution's strategic plan (Zakrajsek, 2016). Teaching and learning centers often have not offered topics related to the university's strategic mission (Sorcinelli et al., 2006), but this was an important part of addressing the needs of the faculty (Cook &

Marincovich, 2010). As evidenced by the continuous increase in online education, institutions have reported that an online teaching and learning presence was key to the institution's strategic plan (Herman, 2012). However, the institution's teaching and learning centers have not provided the appropriate faculty development to align with this mission (Herman, 2012). Community colleges reported providing support for online teaching more than any other institutional type (Beach et al., 2016). Faculty were increasingly interested in support for online teaching and course development, and the lack of opportunities in online teaching and course development has been a primary barrier of online teaching (Herman, 2012; Porter & Graham, 2016). In 2016, Beach et al. reported that research universities planned to see growth in support for teaching in online environments and the assessment of student learning outcomes around 2020.

Design of Faculty Development. Training design can impact the learning and retention of participants (Baldwin & Ford, 1988; Gegenfurtner, Veermans, Festner, & Gruber, 2009). Institutions of higher education can provide an environment in which faculty seek continuous improvement, but organizations cannot force improvement to occur (Wallin, 2003). The responsibility of the organization is to create an environment where faculty are intrinsically motivated to participate in faculty development because it meets their personal or professional needs and provides opportunities for growth (Gegenfurtner et al., 2009; Wallin, 2003). Effective professional development programming is essential to generate institutional change, and ought to focus on changing the faculty attitudes, instructional processes, and organizational structures within higher education (Bergquist & Phillips, 1975). However, offering effective programming is difficult when not coupled with other personal matters, such as internal motivation (Pink,

2009; Schneckenberg, 2010). Organizational support (Gegenfurtner et al., 2009; Jin & McDonald, 2017) and designing with motivation are especially critical components that can have a positive impact on the faculty development experience (Jones, 2013; Rizzuto, 2017; Salmon et al., 2015).

The first step in designing effective faculty development is to understand faculty needs, enabling the development of relevant and worthwhile programming (Elliott et al., 2015; Herman, 2012; Merriam, 2001a; Steinert et al., 2010). Faculty are more likely to attend programming that is of interest to them (Austin, 2011; Elliott et al., 2015; Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015; Steinert et al., 2010). Faculty autonomy can be increased by allowing faculty to determine the specific goals and objectives for faculty development offerings (D'Avanzo, 2014; Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015; Rienties et al., 2013; Wallin, 2003). However, the inclusion of faculty in designing faculty development has not historically been the case at institutions of higher education (Meyer, 2014). To meet consumer needs, learners should have a clear understanding of why professional development has value to them, as well as what they can expect throughout the training (Jones, 2013; Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015). Needs assessments are one method of determining what programming should be offered to meet faculty needs (Ali et al., 2005; Elliott et al., 2015). Because development must be relevant to a faculty member's current situation, faculty may be best served by dividing continuing education into tiered levels based on the needs of beginners, intermediates, and experts (Ali et al., 2005). Organizing a community of learners can also ensure the development is relevant and may help ease the

isolation that is often felt by faculty within their department (Booth & Kellogg, 2015; Cook & Marincovich, 2010).

After the topic has been determined, effective training design should also include determining the appropriate modality and activities to enhance learning. When choosing the modality for faculty development programming, it is important to consider the learning goals and learning styles of participants (Bates, Phalen, & Moran, 2016). Full-time professors preferred one-on-one consultations or online resources for learning about technology and learning strategies (Grover, Walters, & Turner, 2016). Informal training with peers and face-to-face workshops were also preferred methods of learning for mature, educated adults (Courtney, 2018) and full-time instructors (Grover et al., 2016; Lowenthal, Wray, Bates, Switzer, & Stevens, 2013). Regardless of the modality of the development, a productive learning environment is crucial to learner success (Charungkaittikul & Henschke, 2018; Wallin, 2003).

Recommendations for effective training design have been similar for alternative environments and face-to-face training. Overall, faculty desire activities clearly designed and structured on adult learning principles (Cook & Steinert, 2013; Meyer & Murrell, 2014; Rizzuto, 2017; Tainsh, 2016). Opportunities for interaction and engagement, such as structured activities and collaboration with peers, help build trust and focused engagement, providing a more relevant professional development experience (Anderson & McCormick, 2006; Booth & Kellogg, 2015; Cook & Steinert, 2013; D'Avanzo, 2014; deNoyelles et al., 2012; Powell & Bodur, 2019; Salmon et al., 2015). A variety of levels of interaction, including self-reflection, have aided adults in increasing their self-directedness (Rizzuto, 2017; Wynants & Dennis, 2018). Feedback from peers or faculty

in other departments not only provided a student perspective but also helped faculty transfer their new knowledge to their classrooms (Persellin & Goodrick, 2010; Rienties et al., 2013; Roumell, 2019). However, group work or interaction may be displeasing to some adult learners who prefer individual activities (Janakiraman, Watson & Watson, 2018). The opportunity to apply new knowledge through the creation of tangible products allows participants to conceptualize their new information (Booth & Kellogg, 2015; Ching & Hursh, 2014).

Building upon the prior experience of faculty members is also imperative when designing effective faculty development (Ferreira & MacLean, 2018; Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015; Wallin, 2003). Faculty perceptions of their own needs should be taken into account when designing professional development (Ali et al., 2005). Adults utilize their prior experiences in learning what is necessary and relevant to their lives (Snyman & van den Berg, 2018; Wlodkowski & Ginsberg, 2008). Previous experiences can impact a faculty member's attitudes and beliefs towards teaching and learning (Bess, 1982; Checkoway, 2001; Eddy, Hao, Markiewicz, & Iverson, 2019; Mulnix, 2016). These prior experiences may have a profound impact on learner attitude and faculty buy-in, necessary components for effective learning processes (Cook & Marincovich, 2010; Jones, 2013).

Instructor facilitation is also critical to effective training design. Observation of a well-facilitated training provided faculty members with practical strategies they were able to apply in their courses (Elliott et al., 2015; Shattuck et al., 2011). To be most effective and bring about authentic and lasting change of faculty behavior, faculty development opportunities should focus on creating change in multiple ways, such as through faculty

attitudes, instructional processes, and organizational structures (Bergquist & Phillips, 1975; Manduca, 2017). Overall, sustained development programming (i.e., four weeks or more) was shown to be more effective than single offerings (Baldwin & Ford, 1988; Henderson et al., 2011; Manduca, 2017; Rienties et al., 2013). Using blended or online options has helped reduce the seat time of sustained programming and was satisfactory to faculty members (deNoyelles et al., 2012).

Ideally, the effectiveness of faculty professional development may be best determined by measuring both faculty and student outcomes (Condon, Iverson, Manduca, Rutz, & Willett, 2016; Emerson & Mosteller, 2000). Self-reporting of faculty development outcomes, the most common type of evaluation, does not provide adequate data regarding effectiveness (D'Avanzo, 2014). Rigorous quantitative evaluation of faculty development programming are few (Condon et al., 2016) and may be difficult to obtain due to low attendance, lack of ability to randomly assign participants to groups, and varying participant characteristics (Chen, Kelley, & Haggar, 2013). However, teaching and learning centers can begin by establishing clear and measurable outcomes for their program offerings and measuring participants' satisfaction with the programming through surveys (Chen et al., 2013; Zakrajsek, 2016). Evaluating the effectiveness of faculty development through student outcomes is also challenging, as students may leave the university before longitudinal research can be conducted (Kennedy, 2016). Participation in faculty development may not automatically result in changes to faculty attitudes or behaviors. Instead, changes can be significantly delayed and, therefore, a direct impact on student learning may be challenging to determine (Rienties et al., 2013; Stes, De Maeyer, Gijbels, & Van Petegem, 2012).

Modes of Faculty Development. Before teaching and learning centers were the norm across colleges and universities, informal development funded by a campus administrator was frequent (Sorcinelli et al., 2006). Centra (1978) was the first to categorize faculty development by modality, and he developed five main categories: workshops, seminars, or presentations; assessment procedures (i.e., student or supervisor evaluations); technology or course development activities; institutional practices (i.e., sabbatical leave or grant funding); and miscellaneous. Building on Centra (1978), Levinson-Rose and Menges (1981) identified grants, workshops and seminars, student feedback, microteaching and minicourses, and concept training (i.e., videotapes) as the primary faculty development activities in over seventy studies evaluated from the research. In 1997, Weimer and Lenze (1997) verified Centra (1978) and Levinson-Rose and Menges (1981) but also added a new category that had not been seen before: peer-to-peer assistance. Prebble et al.'s (2004) systematic review incorporated several new activities, as well updated terminology for faculty development activities, including short courses; in situ training; consulting, peer assessment, and mentoring; student assessment of teaching; and intensives. From the first categorization to the most recent study of faculty development at colleges and universities in the United States, the workshop has continued to be the most offered and the most attended faculty development modality (Beach et al., 2016; Centra, 1978; Stes et al., 2010; Weimer & Lenze, 1997).

When choosing the modality for faculty development programming, it is crucial to consider the learning goals and learning styles of participants (Bates et al., 2016). Face-to-face, blended, or online are the three primary modalities for offering faculty development training. Workshops, programs, or seminars that are face-to-face and last

anywhere from one hour to a full-day, or even several related workshops spanning a much longer time, are known as synchronous faculty development (Cook & Steinert, 2013; Weimer & Lenze, 1997). These types of workshops have been, and remain, the dominant mode of faculty professional development (Beach et al., 2016; Karagiorgi et al., 2008; Levinson-Rose & Menges, 1981; Weimer & Lenze, 1997). Consultations were identified as the preferred mode of formal development for faculty (Grover et al., 2016). Although one-off workshops do not provide enough integration with the subject matter that is required for noticeable change to occur (Beach et al., 2016; Levinson-Rose & Menges, 1981), workshops are continuously popular because they are easily coordinated and sustainable (Stes et al., 2010). One benefit of the synchronous workshop modality that likely impacted its popularity was that workshops met immediate faculty needs for understanding and applying new information (Beach et al., 2016; Karagiorgi et al., 2008). Adults tended to participate in these formal work-related opportunities to improve specific skills (DeBell & Mulligan, 2005). However, traditional workshops can also be challenging for faculty members to attend due to teaching load and meeting schedules (Cook & Steinert, 2013; Elliott et al., 2015; Rizzuto, 2017). Further, unlike in self-directed learning models, participants were not able to manipulate synchronous workshops to fit their unique needs (Karagiorgi et al., 2008). Therefore, direct training models, such as workshops, can lack relation to actual teaching and learning for the participants (Schneckenberg, 2010).

Faculty developers overwhelmingly agreed that faculty development needs to move away from a reliance on face-to-face development and utilize more online development (Beach et al., 2016). Teaching and learning centers can begin to explore

this modality through the use of blended offerings. When face-to-face training is combined with an online component, it is known as blended (Herman, 2012; Porter & Graham, 2016). Using a blended style of faculty development has decreased the seat time for faculty (deNoyelles et al., 2012), which can be beneficial for sustained faculty development programming. There has been an increase in blended faculty development in the past few years. However, the advantages and disadvantages of this training style on the effectiveness of faculty development is still limited (deNoyelles et al., 2012; Porter & Graham, 2016).

Synchronous and asynchronous online development should be considered a viable option for institutions as they are likely less expensive over the long term (Bates et al., 2016). However, online courses do require more time and resources to develop initially than face-to-face courses (Cook & Steinert, 2013). Synchronous online courses offered greater flexibility in teaching and learning and can lower costs for sponsoring organizations (Cook & Steinert, 2013; Jones, 2013; Wynants & Dennis, 2018). Asynchronous faculty development opportunities allowed participants to complete course activities and assignments at their own pace (Herman, 2012; Jones, 2013; Rizzuto, 2017). The ability to start and finish a course at an individualized pace can be helpful to faculty (Cook & Steinert, 2013; Rizzuto, 2017; Wynants & Dennis, 2018). However, asynchronous online programs have been the least likely type of professional development provided in teaching and learning centers across the nation (Beach et al., 2016; Rizzuto, 2017). Online faculty development opportunities can reach a broader population of learners that is not possible with face-to-face workshops (Cook & Steinert, 2013). Online development also allowed greater flexibility for both developers and

faculty, and faculty may be more likely to choose these offerings due to scheduling constraints (Elliott et al., 2015). Both synchronous and asynchronous online faculty development can be beneficial in providing faculty with an online student experience. Burton (2014) and Chen, Lowenthal, Bauer, Heaps, and Nielson (2017) echoed Henning's (2012) support that faculty should participate in online professional development to experience online learning as a student, as it helped instructional faculty gain a better understanding of the online learner experience in a learning management system (McMurtry, 2013; Salmon et al., 2015).

Although there are many benefits to the online modality, the literature has consistently cited concerns and issues related to the effectiveness of using online training as a professional development opportunity. Online is often viewed as an invalid course delivery method, a plot to threaten grounded enrollment numbers, and a drastic shift from the traditional and time-honored processes of face-to-face classes (Shaver, 2017). Learner related factors, such as diversity and motivation of participants; technological issues, such as activities and assessments; and pedagogical issues, such as course design, are common criticisms of the modality (Koukis, & Jimoyiannis, 2017; Misra, 2018). In addition to low completion rates among adults in asynchronous options (Cook & Steinert, 2013; Jones, 2013; Parr, 2013), Mitchell (2014) revealed that only half of the enrolled participants were exposed to a small percentage of the material before they quit. In contrast, Koutsodimou and Jimoyiannis (2015) and Koukis and Jimoyiannis (2017) reported high levels of course completion and participant satisfaction with course assignments, support, and interaction among K-12 teachers. Larger enrollments in online offerings could cause a lack of social presence, intrinsic motivation, and accountability to

complete the course (Cook & Steinert, 2013; Salmon et al., 2015; Wynants & Dennis, 2018). While online professional development has the potential to help faculty overcome these barriers, the benefit will be negligible if faculty are not engaged in the opportunities (Cook & Steinert, 2013).

Faculty in Higher Education

Early higher education institutions functioned for religious, law, and medical education (Adham et al., 2015; Altbach, 2011). As enrollment in higher education increased, the functionality and focus of the institutions expanded as well. Increases in government funding and a need for a more diverse and skilled workforce substantially increased student enrollment for U.S. universities after World War II (Hansmann, 2012). The establishment of land-grant colleges in the United States provided colleges with government funding to expand their physical footprint and conduct research (Altbach, 2011; Hansmann, 2012). As a result, institutions expanded their focus to include research and modern teaching practices (Adham et al., 2015). The shift away from religious teaching to the scientific inquiry also resulted in changes to the organizational structure of colleges and universities (Adham et al., 2015). Teaching, research, and community service have been considered the central tenets of research universities (Soomro & Ahmad, 2013).

Modern research universities are structured after 19th-century German universities that promoted freedom of teaching and learning (Adham et al., 2015; Altbach, 2011). Research universities have several distinguishing characteristics, including access to government funding, a wide range of degree and research offerings, and a large number of students and faculty (Adham et al., 2015). These campuses are

typically equipped with advanced research equipment and facilities, including expansive libraries for faculty and students (Adham et al., 2015). Although degrees are offered and conferred at various levels, there seems to be a heavier emphasis on graduate and doctoral level education (Adham et al., 2015). Education at these upper levels has allowed research universities to produce a mass amount of scholarly publications and train future scholars for teaching and research at other research universities (Altbach, 2011; Checkoway, 2001).

The culture of higher education can be understood by examining the individual stakeholders, the organizational hierarchy, and the relationships between the two. In 1992, Bergquist identified four related cultures at institutions of higher education that impacted how campus employees viewed both the current state of the institution and the potential for the institution to change over time. Bergquist (1992) initially identified the collegial, managerial, developmental, and negotiating cultures of academic institutions. In 2007, Bergquist added the virtual and tangible cultures and renamed the negotiating culture to the advocacy culture. The collegial culture is faculty participation in research, scholarship and governance to provide quality education to future societal leaders (Bergquist & Pawlak, 2007). Individuals who participate in the managerial culture put importance on working towards specific goals with an emphasis on passing on specific knowledge, skills, and abilities to students (Bergquist & Pawlak, 2007). The developmental culture emphasizes the growth of all members of the institutional community, while the advocacy culture believes in effectively utilizing institutional resources and actively approaching change (Bergquist & Pawlak, 2007). The virtual and tangible cultures were more recently identified and are situated in the technological

advances and the physical communal location of the institution, respectively (Bergquist & Pawlak, 2007). Others (Sattler & Sonntag, 2018) have continued the work of defining the culture of higher education institutions by creating mechanisms that allow institutions to assess the current state of the culture. These cultures provide a systematic way of viewing and studying institutions and institutional stakeholders.

The organizational structure of most institutions follows a similar hierarchy that is intended to help achieve the institution's goals (Bess, 1982; Hammond, 2004; Manning, 2013). Although some research universities may have nuances, the majority of structures include one or more presidents, provosts, deans, and faculty (Hammond, 2004). Changes to this structure are commonly a result of social, economic, or political circumstances or decisions made by stakeholders (Hammond, 2004). Departments, which are the smallest units of higher education organizations, are usually organized by academic discipline or subject matter and made up of individual faculty members, charged by a department head (Hammond, 2004). Several departments are grouped into larger colleges or schools, overseen by a dean (Hammond, 2004). Deans report to a provost, and provosts report to the president (Hammond, 2004). Within this complex organizational structure, faculty stand out as the most critical asset of a quality institution (Schuster et al., 1990; Soomro & Ahmad, 2013). The organizational structure of an institution is significant because the structure has a direct impact on the interpretation of information and obstacles that occur at the bottom of the structure (Hammond, 2004).

Characteristics of Faculty. The primary source of instruction at colleges and universities were once tutors, meant to guide students through their entire educational career (Finkelstein, Conley, & Schuster, 2016). By the 18th century, permanent faculty

members were employed by universities, and the employment rate rose considerably during this time as student enrollment increased (Finkelstein et al., 2016). The profile of the permanent faculty was quite different from the tutors in that faculty were appointed to a specific subject area, rather than a class, they were often older and more experienced, and their employment was longer (Finkelstein et al., 2016). The classification of the permanent and junior faculty roles as "professionals" during this time gave rise to faculty ranking systems (Finkelstein et al., 2016).

Unprecedented growth in the number of institutions, student enrollment, and faculty employment, and diversity in higher education marked the 20th century (Finkelstein et al., 2016). Faculty members were traditionally held in high regard among citizens, but faculty in higher education began to be portrayed negatively beginning in the 1970s, with the blanket assumption that faculty were unconcerned about teaching instead of the more profitable business of research (Condon et al., 2016; Long, 1996; Sorcinelli et al., 2006). Despite this controversial view of faculty, employees and community stakeholders continued to value the institution of higher education (Chiang, 1991). Over 1.5 million faculty are employed at higher education institutions across the United States, and the personal and professional profiles of the faculty continue to change rapidly (Luna, 2018).

As faculty members typically have a higher level of education than other workforce laborers, it is common that their salary is higher (Lounsbury & Datubo-Brown, 2019; Marks, 2003, 2011). However, since the 1970s, wages of full-time faculty have not increased at the same rate as other skilled workers (Lounsbury & Datubo-Brown, 2019; Marks, 2003, 2011; O'Meara, Terosky, & Neumann, 2008). Overall, average

salaries at public four-year institutions in the United States revealed a 43% difference between full-time instructional faculty and professors (Lounsbury & Datubo-Brown, 2019). Women accounted for less than 35% of the full-time faculty at public four-year institutions at the turn of the century but now account for over 44% (Austin, 2010; Lounsbury & Datubo-Brown, 2019; Marks, 2003). Female faculty members earn significantly less than their male counterparts and are also less likely to be tenured and retained (O'Meara, 2015; O'Meara et al., 2008). Black and Hispanic faculty members have also continued to increase over the last ten years and accounted for 13% of full-time faculty at public four-year universities in the Southern United States (Lounsbury & Datubo-Brown, 2019; Marks, 2003).

Additional research into the faculty profile has identified variances specific to a faculty's career stage (O'Meara et al., 2008; Schuster et al., 1990). The majority of research conducted on career stages has focused on the early stage (Zacher, Rudolph, Todorovic, & Ammann, 2019), which is typically the first seven years of a faculty member's career (Austin, 2010). During this seven-year probationary period, novice faculty and faculty without tenure are often referred to as junior faculty (Austin, 2010). If seeking tenure, the early stage of a faculty member's career can be extremely robust, as faculty are participating in specific roles and responsibilities to include on their tenure application (Austin, 2010). After this time, faculty enter into the mid-career stage. The mid-career stage has not been well defined or well researched (Zacher et al., 2019), but it correlated to the time when faculty apply for tenure and may also mirror a faculty member's middle-age years (Austin, 2010; Houle, 1974). Midcareer faculty often take on additional leadership roles in addition to their already full teaching and research

schedules (Austin, 2010). The final stage of a faculty's career is the designation of senior faculty, which is the period within 10 to 12 years of retirement (Austin, 2010).

The growing diversity of faculty in institutions of higher education indicated that many faculty might not follow the conventional career stages (Austin, 2010; Cherrstrom & Alfred, 2020). Traditional tenure-track positions at institutions have given way to adjunct and contract professors (Gyurko et al., 2016; Manning, 2013; Shattuck et al., 2011). Recently, there has been a rise in non-tenure-track and part-time faculty, as tenure-track members have decreased by nearly half (Austin, 2010; Hansmann, 2012; Sorcinelli et al., 2006). Between 1970 and 2000, there was a 24% decrease in the employment of full-time faculty members due to the hiring of additional part-time faculty (Marks, 2003). The reduction in full-time employment leads to an increase in part-time faculty employment that grew to 54% of the instructional staff at public four-year universities in 2018 (Finkelstein et al., 2016; Kezar & Maxey, 2014; Lounsbury & Datubo-Brown, 2019; Marks, 2011). The increase in part-time faculty has been attributed to providing a decrease in course load for full-time faculty to allow additional time for research (Gappa & Leslie, 1993) and a more sustainable business model for institutions (Brennan & Magness, 2018). The number of full-time faculty hired for non-tenure track positions has also increased, increasing the number of faculty in the early career stage (Austin, 2010). Despite hiring trends, tenure-track faculty were still the majority of faculty members at research universities (Finkelstein et al., 2016).

The three pillars of responsibility for faculty at institutions of higher education—teaching, research, and community service—force faculty members to divide their time and priorities (Bess, 1982; Cherrstrom & Alfred, 2020; Persellin & Goodrick, 2010; Post,

2011; Soomro & Ahmad, 2013). Within the three pillars, faculty may perform over 300 different tasks, such as teaching and advising students, researching, grant writing, providing outreach and public services, and completing administrative duties (Bess, 1982; Sorcinelli et al., 2006). The expanding responsibilities of faculty raise questions regarding how they should prioritize multiple workloads (Austin, 2010; Cherrstrom & Alfred, 2020; Hott & Tietjen-Smith, 2018; McCune, 2018; Oduaran & Akanni, 2017; Schimanski & Alperin, 2018; Schuster et al., 1990). Continued research of both faculty and stakeholders have reported that, regardless of position, teaching should be the primary responsibility of faculty (Atkins, Brinko, Butts, Claxton, & Hubbard, 2001; Chiang, 1991; Schimanski & Alperin, 2018). Although many faculty were happy with their academic life, most also believed the workload was difficult, if not impossible, without making costly personal sacrifices (Atkins et al., 2001; Austin, 2010). Gender and personality traits were thought to have a significant effect on the work-life balance of academics (Oduaran & Akanni, 2017), with female faculty members having to make more severe sacrifices than their counterparts (Austin, 2010). Workload was reportedly a more significant source of dissatisfaction for non-tenured faculty, while tenured faculty were more likely to be dissatisfied with their salary and benefits (Ott & Cisneros, 2015).

The organizational culture of higher education institutions may provide conflicting information for faculty members regarding the three pillars of responsibility. Tenure and promotion processes were developed in the early 1800s, but modern tenure practices were not developed until the early 20th century as a part of the American Association of University Professors (Hansmann, 2012; Schimanski & Alperin, 2018). The idea of tenure amplified when faculty positions were classified as a professional

career, and faculty were viewed as experts in their fields (Finkelstein et al., 2016). Although controversial, supporters argue that tenure allows instructors to address topics without fear of retribution and that it allows institutions to hire quality faculty (https://www.aaup.org/issues/tenure; Hansmann, 2012). The tenure and promotion process is a rigorous evaluation process that emphasizes excellence in teaching and research, in which faculty are expected to submit evidence of their excellence, including teaching evaluations, scholarly publications, teaching portfolios, and peer evaluations (Schimanski & Alperin, 2018; Simmons & Sweeder, 2016). Some researchers indicated that tenure and promotion processes might diminish teaching and service requirements in favor of a more substantial focus on research (Bess, 1982; Kasten, 1984; O'Meara et al., 2008; Schimanski & Alperin, 2018; Serow, 2000) and instead, create awards for teaching to disguise a culture where research is the main objective of faculty responsibilities (Serow, 2000). Recommendations on balancing the teaching, research, and service requirements for promotion and tenure have not yet been evaluated (Schimanski & Alperin, 2018).

If tenure was a rigorous teaching and evaluation process, then it should not have been surprising that tenure-track participants assigned higher importance to teaching professional development goals (Chauvin, Bowdish, & Krane, 1997) and used more student-centered teaching approaches (Kezar & Maxey, 2014) than non-tenure-track participants. However, Figlio, Schapiro, and Soter (2015) deduced that students learned better from long-term contract faculty than tenure-track faculty when comparing the first-time freshman taking the same course, while Rogers (2015) found no statistically significant influence on student outcomes based on faculty status. As the responsibilities

of tenured and tenure-track faculty shift during the mid-career stage (Austin, 2010), faculty may find themselves building relationships with other faculty and students, as well as focusing on long-term projects (Grant-Vallone, & Ensher, 2017). Professional development goals for teaching were essential to both tenure- and non-tenure-track faculty; however, when research productivity was necessary to meet organizational expectations and achieve professional rewards, non-tenure-track faculty members placed higher importance on professional development goals in research than in teaching (Chauvin et al., 1997). A lower emphasis on professional development in research for tenure-track faculty may be because tenure-track faculty have already established themselves as skilled researchers and did not see a great need for development in the area of research (Chauvin et al., 1997).

The cost of maintaining quality faculty members has been increasingly high, yet the cost of recruiting and hiring new faculty would be significantly more expensive than the retention of current faculty (Soomro & Ahmad, 2013). This organizational cost has made faculty vitality an important concern for universities. Vitality appeared to become a primary concern during a faculty's midcareer stage (Austin, 2010). Organizational factors—resources, communication, leadership, climate, etc.—were thought to have a more negative impact on faculty vitality than personal factors (Schuster et al., 1990). The traditional hierarchy of faculty positions used in institutions of higher education may have increased the sense of isolation that faculty already felt (Atkins et al., 2001; Austin, 2010; Post, 2011; Whitt, 1991). New faculty were often left to their own devices to determine what needed to be accomplished and how that was to be accomplished (Whitt, 1991). Non-tenure-track faculty may have felt especially isolated, perhaps because they

were often not viewed as professionals (Ott & Cisneros, 2015). Overall, faculty and graduate students emphasized the difficulty of having professional identities in both their scientific discipline and in teaching (Atkins et al., 2001; Austin, 2010; Cherrstrom & Alfred, 2020; Mathany, Clow, & Aspenlieder, 2017). However, organizational factors can have a positive impact on faculty vitality. For example, chairpersons can support faculty through resources and financial support, as well as encouraging professional growth (Austin, 2010; Cherrstrom & Alfred, 2020; Jin & McDonald, 2017). Professional development has also positively impacted faculty's quality of life that in turn impacted work satisfaction (Cherrstrom & Alfred, 2020; Lockhart, 2018; Rosser, 2004). Using quality of life indicators located in the literature, Lockhart (2018) confirmed that professional development positively impacted faculty members' career satisfaction, job confidence, and job motivation.

Faculty as Adult Learners. Although faculty may not always view themselves as learners, faculty developers perceive themselves as facilitators of the learning process (Mulnix, 2016). The faculty learning experience is often parallel to that of the student learning experience (Mulnix, 2016; Weathersby & Tarule, 1980). For example, faculty rely on their own learning experiences when they first explore the process of teaching, which is similar to how students utilize prior study methods when they transition to college (Mulnix, 2016). As adult learners, however, faculty members should have control over their learning, including during faculty development programming (Knowles et al., 2015).

There are three distinct ways that a person can learn to teach a subject: obtain a degree in teaching and learning from a recognized institution, attend workshops and

training to acquire or refine specific skills, or practice self-directed learning, in which the individual is responsible for planning, pacing, and assessing the learning tract (Post, 2011). Faculty are typically educated at institutions and experts in their field, but they may need a process for learning how to teach (Gyurko et al., 2016; Henley & Magelssen, 1990; Kane et al., 2002; Weimer & Lenze, 1997). Different processes outlining how faculty experience the process of learning how to teach have been identified, with one beginning before a faculty member is even employed (Post, 2011), and the other focusing on the faculty's relationship to the subject matter and the student (Kugel, 1993). Subject matter knowledge is, however, only one type of knowledge necessary for effective teaching (Murphy & Jensen, 2016; Persellin & Goodrick, 2010). Knowles et al. (2015) argued that adults must be knowledgeable in the technical, social, and developmental domains of learning to be effective instructors. Boyer's (1990) four scholarships, discovery, integration, application, and teaching, suggested that acting as a professional scholar is a dynamic and continuous process of learning. The Technological Pedagogical Content Knowledge framework (Koehler, Mishra, Kereluik, Shin, & Graham, 2014), which integrates four types of knowledge required for effective technology integration, is a modern illustration of Knowles' concept. Good teaching is not a static quality; it requires continued learning engagement (Boyer, 1990). Therefore, faculty may often have cause to engage in these processes to learn the necessary material (Knowles et al., 2015).

In their integrative model of motivation to transfer training, Gegenfurtner et al. (2009) argued that individual, training, and organizational factors impact the transfer of training. Prior knowledge, cognitive, and personality differences are three personal

characteristics that can have a significant impact on adult learning (Gegenfurtner et al., 2009; Knowles et al., 2015). Learners use their past experiences and prior knowledge to make sense of new information (Knowles et al., 2015). During new learning, adults compare preexisting knowledge with knowledge that is already a part of their long-term memory. The process of activating existing knowledge can either positively or negatively impact the learning process (Knowles et al., 2015; Sharit & Czaja, 2018). Learning new information can be difficult when the new information does not match the current frame of reference, habits, and points of view that have become integrated into our lives (Mezirow, 1997).

Prior knowledge can also impact learning transfer. When a learner's new knowledge agreed with their current understanding of the world, positive transfer occurred. In contrast, when a learner's new knowledge does not coincide with their actual experiences or expectations, negative transfer occurred (Foley & Kaiser, 2013). Learning transfer is a critical component of adult learning theory (Foley & Kaiser, 2013), yet, it was one of the most common problems of learning (Hilgard & Bower, 1966). Although organizations invest increasing time and capital into training their employees, research indicated a lack of transfer of learning to the job environment (Baldwin & Ford, 1988). Positive transfer of training is the level to which employees can learn and retain knowledge, skills, and attitudes from training and apply them to another environment over a sustained period (Baldwin & Ford, 1988). Although understanding new information is one component necessary to facilitate learning transfer (Hilgard & Bower, 1966), faculty must also organize the new concepts into their existing knowledge and experiences to help facilitate transfer (Mulnix, 2016; Roumell, 2019). Further, learning

and retention are affected by training design, learner characteristics, and environmental characteristics, despite what may have initially been learned (Baldwin & Ford, 1988; Santos, 2018). Trainee characteristics, such as internal motivation, autonomy, and a need for achievement, can aid in learning and retention (Baldwin & Ford, 1988; Ferreira & MacLean, 2018; Gegenfurtner et al., 2009). Thorndike's transfer theory posited that learners benefit from analogizing new learning experiences with old ones; however, assimilation was heavily dependent on the inclusion of identical elements in both environments (Hilgard & Bower, 1966). It has been recommended, therefore, to utilize appropriate theory and principles, and stimuli and responses, that are the same or similar in the training and transfer environments to increase learning and retention to aid in learning transfer (Baldwin & Ford, 1988; Santos, 2018).

Cognitive differences can also impact the learning process for faculty members. Lindeman (1926), Thorndike (1935), and Sorenson (1930) were pioneers in understanding that continuous learning was possible even in adulthood. The belief that aging adults were not able to learn new information has been discounted. The research confirmed that humans continue to create neurons throughout their life (neurogenesis) and that aging adults continue to have the ability to change the shape of their brain through learning (neuroplasticity; Glick, 2011; Knowles et al., 2015; Organization for Economic Cooperation & Development [OECD], 2007; Sousa, 2012). While memory recall may decline in mature age, barring any neurological abnormalities, adults continued to learn new information until a mature age (Sousa, 2012). Educational level and continued participation in educational processes have been positively correlated with maintaining brain performance (Morais, Pera, Ladera, Oliveira, & García, 2018). As

university faculty are typically higher educated than others (Lounsbury & Datubo-Brown, 2019; Marks, 2003, 2011), they may be at an advantage.

The brain begins the cognitive process by filtering the stimuli that were collected through the human senses. The thalamus is in charge of filtering these stimuli, which is an involuntary process; however, more attention is given to stimuli that invoke fear or that we perceive as important. After the stimuli have been filtered, the reticula sensory register takes over and begins to process the stimuli by assigning meaning to them. At this stage, information enters into the brain's short-term memory, which is comprised of both working memory and immediate memory. Next, the brain begins processing information for long-term memory. The process of converting short-term memory to long-term memory occurs in the neurons of the cerebrum. Neurons have dendrites that send and receive information between neurons over the synapse, the space between dendrites. The communication between dendrites occurs through neurotransmitters, such as dopamine and serotonin (Glick, 2011; Knowles et al., 2015; OECD, 2007; Sousa, 2012). Learning occurs when neurons change the way they communicate with one another (Knowles et al., 2015; Sousa, 2012). However, the neurotransmitters can be affected by the learning environment or the teaching strategies (Knowles et al., 2015). For example, a positive environment could cause the release of dopamine, a positive neurotransmitter, which in turn increases a learner's memory, focus, and motivation. Emotional responses can also shut down these systems, making it difficult or impossible to uptake new information in times of high stress (Knowles et al., 2015; Sousa, 2012). Consequently, positive emotions and moderate levels of stress enable individuals to recall learning at a deeper level (Wlodkowski & Ginsberg, 2008). Providing a physically and

mentally safe environment, therefore, is essential to cognitive processing (Knowles et al., 2015; Sousa, 2012; Tainsh, 2016). Long-term memory is enhanced through associated neurons that allow the learner to connect new information with old information (Glick, 2011; Knowles et al., 2015; OECD, 2007; Sousa, 2012).

Updated neuroscience research related to cognitive processing has provided support for adult learning principles (Knowles et al., 2015; Tainsh, 2016). The frontal cortex in the human brain is not fully developed until at least the second decade of a person's life, indicating that adults can engage in higher-order thinking skills and meta-cognition at a higher level than younger learners (Glick, 2011; Knowles et al., 2015; OECD, 2007; Sousa, 2012).

In addition to prior knowledge and cognition, personal characteristics can also impact the learning process. Human personality is comprised of semi-permanent traits that explain human behavior. Personality includes mental, emotional, physical, and social characteristics and has typically been measured using the Big Five model, which includes neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Pouratashi & Zamani, 2017). Research has confirmed that extraversion and agreeableness were positively correlated to educational performance in faculty members, while neuroticism had a negative correlation with educational performance (Pouratashi & Zamani, 2017). Adult learning was also heavily influenced by adult attitudes, which included attitudes towards the facilitator, the subject, personal self-efficacy, and learning goals (Gegenfurtner et al., 2009; Jones, 2013; Wlodkowski & Ginsberg, 2008). A clear understanding of instructors' professional identity may be helpful to developers, as faculty identity may impact their beliefs or approaches to

learning (Eddy et al., 2019; McCune, 2018; Roumell, 2019). Adults may enter into learning experiences to support specific life cycle transitions, which are often related to major life changes or changes in internal motivation (Weathersby & Tarule, 1980). A faculty member's attitudes and beliefs towards teaching and learning can be affected by prior experiences, such as observations of other faculty and their graduate school experience (Bess, 1982; Checkoway, 2001; Eddy et al., 2019; Mulnix, 2016). Faculty may also find it embarrassing to participate in particular types of activities to aid in their teaching, learning, or research for fear of being labeled as unskilled (Crow et al., 1976; Mathany et al., 2017). Specifically, motivation to participate in training highly depended on the learner's attitudes towards the training, which is heavily influenced by outside factors, such as previous positive or negative experiences (Gegenfurtner et al., 2009; Jones, 2013; Post, 2011).

Research on the impact of work conditions and resources on career development is lacking (Zacher et al., 2019), but organizations can aid in the learning and retention of their employees by providing a supportive work environment and reinforcement of attitudes learned in training (Baldwin & Ford, 1988; Wallin, 2003). Organizational support has been shown to have a profound impact on learner motivation and learning transfer (Gegenfurtner et al., 2009; Jin & McDonald, 2017; Jones, 2013). An organization can assist adults by "(a) increasing organizational support and positive initial user expectations, (b) reducing factors that lead to learner mental overload, and (c) designing motivational strategies into the learning content" (Jones, 2013, p. 33). However, no professional development opportunities can be successful or bring about change without faculty ownership and buy-in (Cook & Marincovich, 2010; Wallin,

2003). Internal motivation is vital in that it creates an opportunity for individuals to invest in themselves and the tasks (TEDx Talks, 2012). Autonomy, mastery, and purpose can help foster authentic intrinsic motivation (Pink, 2009). The research related to learning transfer is expected to shift away from a focus on predicting learning transfer from individual factors to explaining how developers can use the known factors to enhance transfer (Baldwin, Ford, & Blume, 2017).

Participation in Faculty Development. Research consistently concluded that workshops were the most commonly provided and attended faculty development method at institutions of higher education (Beach et al., 2016; Herman, 2012; Levinson-Rose & Menges, 1981; Stes et al., 2010; Weimer & Lenze, 1997), and that faculty were more likely to participate in development programming that they were interested in and that meet their schedules (Elliott et al., 2015; McCune, 2018). Short workshops on topics such as technology integration, active teaching strategies, student assessment, and curricular reform were consistently the focus of America's teaching and learning centers (Beach et al., 2016; Sorcinelli et al., 2006). However, research has not been able to provide a comprehensive profile of the faculty who are attending these services (Sweet et al., 2017). Some research indicated that full-time professors prefer one-on-one consultations or online resources for learning about technology and learning strategies (Grover et al., 2016). Interest in development offerings was likely to vary depending on the faculty member's career stage (Schuster et al., 1990; Post, 2011).

The fact that faculty development, voluntary at most large, research institutions, is one reason why attendance may be so low (Fink, 2013). Fink (2013) suggested that only 25-30% of faculty at U.S. higher education institutions utilized the development services,

indicating that research on faculty preferences may not be able to be generalized to an entire institution. Faculty developers in institutions of higher education have often voiced a desire to mandate training for appointment or promotion (Adkoli, Al-Umran, Al-Sheikh, & Deepak, 2010; Adkoli & Sood, 2009; Farmer, 2004; Haras, Taylor, Sorcinelli, & von Hoene, 2017). Faculty have also indicated that mandating professional development would increase attendance (Kreaden, 2002; Steinert et al., 2009). Involving faculty in the process of creating a mandatory training policy has proven to be successful in some cases (Kreaden, 2002).

From a systems perspective, organizational and personal components could be contributing to the low participation in faculty development (Austin, 2011). Supports and barriers to teacher leadership were organized by Zinn (1997) into four categories: (a) people and interpersonal relationships, (b) institutional structures, (c) personal considerations and commitments, and (d) intellectual and psychosocial characteristics. Later, Caffarella and Zinn (1999) adapted the research to professional development and expanded the specific barriers and supports for each category throughout the then-current literature. People and interpersonal relationships included relationships within and outside the institution (Caffarella & Zinn, 1999). Positive working relationships and social networks provided strong support systems, while the reverse decreased productivity and created conflict in both personal and professional environments (Caffarella & Zinn, 1999). Institutional structures generally indicated the amount of support provided by the organization and leaders within the organization (Caffarella & Zinn, 1999). The personal considerations and commitments category was intentionally separated from relationships because the main focus was events that occur in the faculty's

private life. Finally, intellectual and personal characteristics encompassed the internal motivations of individuals (Caffarella & Zinn, 1999). Researchers have continued to research the specific factors that influenced participation in faculty development (Austin, 2011; Brownell & Tanner, 2012; Cook & Steinert, 2013; Elliott et al., 2015; Goodale, Carbonaro, & Snart, 2002; Gordan, 2018; Manduca, 2017; PCAST, 2012; Powell, 2006; Sabagh & Saroyan, 2014; Sener & Hawkins, 2007; Sorcinelli et al., 2006; Steinert et al., 2009; Steinert et al., 2010; Sullivan et al., 2013; Sunal & Hodges, 1997; Thomas, Karr, Kelley, & McBane, 2012), and the majority of the findings are still applicable to Caffarella and Zinn's (1999) conceptual framework.

The majority of research findings related to enabling factors for participation in faculty development have been in the domains of institutional structures and intellectual and psychosocial characteristics. A few researchers have identified enabling factors related to people and interpersonal relationships, such as feedback from leaders (Wood, 2015) and recognition and encouragement from within their department (Caffarella & Zinn, 1999; Sabagh & Saroyan, 2014).

Institutional structures, such as extrinsic rewards (Dailey-Hebert et al., 2014; Sabagh & Saroyan, 2014; Wood, 2015), climates that foster collaboration (Caffarella & Zinn, 1999; Sabagh & Saroyan, 2014; Shagrir, 2017; Steinert et al., 2010), a variety of research-based training opportunities (Caffarella & Zinn, 1999; Sabagh & Saroyan, 2014), and time-release to participate in programming (Caffarella & Zinn, 1999; Sabagh & Saroyan, 2014) supported faculty in their development journey. Reward systems were not the only factor that affected participation in faculty development, but they were an important method of organizational support for participation in faculty development

(Chen & Chen, 2017; O'Meara et al., 2008). Faculty preferred incentives or rewards that included release time and flexibility of workload, funds for research or bonuses, and further opportunities for development (Benito & Scott-Milligan, 2018). Tenure and promotion was one long-standing reward system utilized at research universities (O'Meara et al., 2008). However, not all faculty were motivated to participate in faculty development by rewards and recognition (Chen & Chen, 2017). Chen and Chen (2017) identified several scenarios where rewards or recognition did not act as motivation for participation in faculty development, such as a decreased interest in achievements, an increased desire for independence and autonomy, and previous recognition for a lower standard of achievement.

Despite the amount of research confirming the importance of external motivation for participating in faculty development, adult education theorists have insisted that internal motivation is the key to overall motivation for adult learning (Ferreira & MacLean, 2018; Knowles et al., 2015; Pink, 2009). Motivators are the intrinsic perceptions that faculty believe in regard to their quality of work, performance rewards, and responsibilities (Rosser, 2004). Motivation associated with reward and punishment was, generally, not enough to change individuals; therefore, internal motivation needed to be generated and supported (Crow et al., 1976). Participation in faculty development was influenced by intrinsic motivation, such as the need for self-improvement and lifelong learning (Dailey-Hebert et al., 2014; Sabagh & Saroyan, 2014; Shagrir, 2017; Steinert et al., 2010; Wood, 2015) and an obligation to the student (Wood, 2015). Modern views of motivation situated motivation as tied to an individual's goals (Kanfer & Chen, 2016). However, people's goals are not isolated from their environments; instead, goals are

present in a hierarchy of networks that change over time (Kanfer & Chen, 2016). Further, motivation was dependent on the individual and the situation and existed on a continuum from low high (Gladwell, 2004; Jones, 2013; Kanfer & Chen, 2016; Wlodkowski & Ginsberg, 2008). Therefore, leaders and developers should be less concerned with one perfect method of motivation and more concerned with the method(s) that meet the needs of their employees (Gladwell, 2004).

Likewise, barriers to participation in faculty development also seemed to be situated mainly in the domains of institutional structures and intellectual and psychosocial characteristics. A lack of colleague support or interest was one finding that supported the domain of people and interpersonal relationships (Caffarella & Zinn, 1999; Thomas et al., 2012). Personal scheduling was the only impeding factor in the domain of personal considerations and commitments (Dailey-Hebert et al., 2014; Gordan, 2018; Powell, 2006; Shagrir, 2017).

Barriers in the domain of the institutional structure included training location (Cook & Steinert, 2013; Gordan, 2018; Manduca, 2017; Steinert et al., 2009; Steinert et al., 2010), limited resources (Caffarella & Zinn, 1999; Manduca, 2017; PCAST, 2012; Powell, 2006; Sunal & Hodges, 1997; Thomas et al., 2012), a lack of relevant or interesting workshop offerings (Caffarella & Zinn, 1999; Brownell & Tanner, 2012; Dailey-Hebert et al., 2014; Gordan, 2018; Powell, 2006; Sullivan et al., 2013) and a lack of organizational support (Sener & Hawkins, 2007; Steinert et al., 2009). The greatest barrier of all appeared to be time (Brownell & Tanner, 2012; Cook & Steinert, 2013; Elliott et al., 2015; Goodale et al., 2002; Gordan, 2018; Manduca, 2017; PCAST, 2012; Powell, 2006; Sener & Hawkins, 2007; Sabagh & Saroyan, 2014; Sorcinelli et al., 2006;

Steinert et al., 2009; Steinert et al., 2010; Sunal & Hodges, 1997; Thomas et al., 2012). With increased workloads and responsibilities, teaching schedules, and travel plans, faculty are overwhelmed by their responsibilities and may have trouble finding time to attend faculty development programming.

Faculty members rarely have incentives to participate in professional development opportunities, and a lack of incentives and rewards has been identified as another major barrier to participation in faculty development (Caffarella & Zinn, 1999; Brownell & Tanner, 2012; Crow et al., 1976; Gordan, 2018; Manduca, 2017; PCAST, 2012; Sabagh & Saroyan, 2014; Schneckenberg, 2010; Steinert et al., 2009; Steinert et al., 2010), as well as a lack of intrinsic motivation (Shagrir, 2017).

System Theory

The idea of the system as a tangible entity began in developmental psychology. Early learning and psychological theories were categorized by their organismic and mechanistic backgrounds, each depicted as a group of component parts working together. Mechanistic psychology models were represented as a process machine that could be studied by its pieces. In contrast, the organismic psychology models, depicted as a living organism, were studied as parts of a whole (Knowles, 1990b; Reese & Overton, 1970). Implementing the organismic model in his studies on metabolism, Biologist Ludwig von Bertalanffy began to develop his ideas of general system theory (Bertalanffy, 1968). Although he is often cited as the seminal author of system theory, Bertalanffy did not publish his theory until after World War II, at which time several other 20th-century researchers were developing similar ideas, allowing the work to became interdisciplinary as Bertalanffy and experts in other fields furthered the theory (Bertalanffy, 1968;

Hammond, 2013; Laszlo & Krippner, 1998; Pascoe, 2006; Pouvreau, 2013). In the last 60 years, system theory has continued to expand and diverge into several other areas such as cybernetics, social systems thinking, and organizational theory (Hammond, 2013; Kast & Rosenzweig, 1972; Lane & Jackson, 1995; Ramosaj, 2014). Technological developments and emerging industries, such as manufacturing and transportation, required that science reform its age-old inquiry process to understand better the complex organizations of the 20th century (Bertalanffy, 1968; Hammond, 2013; Senge, 1990).

Traditionally, the background, methods, and results of scientific inquiry within a discipline are separated from other disciplines, making it difficult to make connections and draw conclusions across fields (Banathy, 1992). In contrast, system science accentuates the relationships between the interacting parts which compose a system, intending to understand the components' interrelationships (Banathy, 1992; Senge, 1990). As the general systems theory aimed to unify science, the development of the theory itself has also led to the development of general system laws that apply to all types of systems (Banathy, 1992; Bertalanffy, 1950, 1968; Dubrovsky, 2004; Lane & Jackson, 1995).

The general definition of a system is a group of interrelated elements (Bertalanffy, 1950, 1968; Bess & Dee, 2008; Laszlo & Krippner, 1998). The interrelationships within and between systems are equally important as the individual components that make up the system itself (Kordova, Frank, & Miller, 2018). Often colloquialized as "the whole is greater than the sum of its parts" (Bertalanffy, 1968, p. 55), emergence implied that a complex system (i.e., a set of interrelated elements) resulted in an entirely new element with its unique characteristics and qualities, and the individual elements cannot be

isolated from the system while maintaining the same characteristics and qualities (Banathy, 1992; Bertalanffy, 1968; Hammond, 2008). According to Bertalanffy (1950, 1968), systems have eight formal properties: (a) a change in one element will create a change in all other elements in the system; (b) a change in the element is only dependent on the element itself; (c) summativity, or changes in the system follow the same equation as changes of the elements; (d) progressive segregation, or the interactions between the elements and the system decrease over time; (e) principle of centralization, or an insignificant change in an element may cause a significant change in the system; (f) changes in elements create progressive mechanization, or independence of elements; (g) hierarchical order, or system components also comprise their systems at a lower level; and (h) the distinction between open and closed systems.

The level or degree of interaction between the system and the environment is a critical distinction between systems (Banathy, 1992; Bertalanffy, 1968; Kast & Rosenzweig, 1972). Systems that are more static and controlled are labeled closed, while more dynamic and purposeful systems are labeled open (Banathy, 1992; Bertalanffy, 1968; Bess & Dee, 2008). Unlike in closed systems, open systems can achieve an end goal if the initial conditions or the process is changed, a concept termed equifinality (Bertalanffy, 1968; Bess & Dee, 2008). The complexity and moderate openness of public education categorizes it as a purposive system: the system has one primary purpose, but it also can choose its objectives and methods (Banathy, 1992). The distinction between open and closed systems is an important categorization, but systems are also categorized in other valuable ways. Two major types of systems are natural and designed systems (Banathy, 1992). Human-made, or designed systems, include designed physical systems,

designed conceptual systems, and human activity systems. Human activity systems are purposefully organized systems, such as educational institutions, that are often less tangible than natural systems and are operated by the activities of the individuals within the system itself. Systems can also be healthy or unhealthy. Healthy systems bring new information and strategies into the system and encourage the spread of information within and between systems (Manduca, 2017).

Open systems process communications to aid in adaptation in two main ways: entropy and feedback. The concept of entropy, taken from thermodynamics, states that heat cannot be converted into the equivalent amount of work without other changes occurring within the system (Miller, 1965). Therefore, to balance itself, a system continuously responds to input and output to maintain its equilibrium (Bertalanffy, 1968). Systems also process negative and positive feedback. Feedback acts as the origin of purposeful behaviors and is another way that systems can work toward achieving equilibrium (Bertalanffy, 1968). Banathy's (1992) educational activity systems model differentiated between positive and negative feedback to generate systems change. Negative feedback indicated that something within the system should change, while positive feedback suggests that the whole system should change (Banathy, 1992). Senge's (1990) learning organization model suggested the use of reinforcing feedback to achieve organizational growth and balancing feedback when goal setting.

The sharing of theory, models, and ideas across disciplines enabled researchers to identify and understand gaps in knowledge that otherwise may have been missed and reduces the need to duplicate efforts (Bertalanffy, 1950; Boulding, 1956). In practice, the lens of system theory aided departments in analyzing environments with the flexibility

needed to identify and achieve departmental goals while still meeting the purposes of the supra-system. Looking at individual pieces of a complex environment does not allow for an adequate understanding of the dynamics that occur between variables within a system (Banathy, 1992). Organismic models of developmental psychology argued that, much like a living organism, it is not possible to reduce one whole into individual parts (Knowles, 1990b).

Only a few studies have applied a systems perspective to the higher education setting (Adham et al., 2015). To explain organizational phenomena, individual and environmental factors must be evaluated together (Bess & Dee, 2008). Systems thinking provided a critical outlook for institutions enabling them to innovate in an ever-changing landscape of higher education (Adham et al., 2015).

A systems perspective required that researchers look past the obvious and deeper into the underlying structures that influenced human behavior (Senge, 1990). In any complex system, there are multiple levels of explanation that could occur (Borrego & Henderson, 2014; Senge, 1990). Most often, organizational evaluations are conducted quantitatively, which fails to capture stakeholder views about underlying causes or ideas for improvement (Wagner, 1993). In contrast, system theory supports a constructivist approach by obtaining information through structural explanations to understand the cause of the behaviors being evaluated (Hammond, 2008; Senge, 1990).

Summary

The purpose of this chapter was to present a literature review summarizing approaches to adult learning, including faculty professional development, and discuss the role of instructional faculty and faculty development in institutions of higher education.

The background, principles, and main models for the three most formulated adult learning theories were presented (Knowles, 1990b; Mezirow, 1997; Tough, 1978). The critical similarity between adult learning theories is that adults are self-directed learners (Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015; Merriam, 2001a; Mezirow, 1991). History of faculty development in institutions of higher education was shared, along with modern design, topics, and modes of faculty development. Although faculty development in higher education is overly traditional in mode and topic (Beach et al., 2016; Sorcinelli et al., 2006), institutions are curious about alternative modalities in light of the changing demographics of higher education (Beach et al., 2016; Chen, 2014; Lumina Foundation, 2019). The last section of the literature review presents a profile of faculty in higher education, with an emphasis on higher education culture and instructional faculty characteristics. A comprehensive look at the enabling and impeding factors that influence participation in faculty development revealed that time (Brownell & Tanner, 2012; Elliott et al., 2015; Goodale et al., 2002; Gordan, 2018; Manduca, 2017; Powell, 2006; Sabagh & Saroyan, 2014; Sener & Hawkins, 2007; Sunal & Hodges, 1997; Thomas et al., 2012) and lack of offerings (Brownell & Tanner, 2012; Dailey-Hebert et al., 2014; Gordan, 2018; Powell, 2006; Sullivan et al., 2013) are the most common barriers, while intrinsic motivation (Dailey-Hebert et al., 2014; Sabagh & Saroyan, 2014; Shagrir, 2017; Wood, 2015) and extrinsic rewards (Dailey-Hebert et al., 2014; Sabagh & Saroyan, 2014; Wood, 2015) are the most common supporting factors for participation.

In Chapter III, the phenomenological case study is presented as the research methodology for the study. A discussion of support for applying phenomenological case study to this particular study is provided, along with reasoning against alternatives. A

description of the procedure and data collection used for this study is detailed, including information on the setting, sample, data collection, procedure, and analysis.

CHAPTER III

Research Methods

The study utilized a phenomenological case study research design to understand the internal and external factors that influence instructional faculty members' participation in online professional development training. After an integrative literature review, qualitative methods were deemed appropriate to complement the literature, providing additional detailed and meaningful results (Merriam & Tisdell, 2016) of the faculty development experience, thereby allowing researchers to construct a complete understanding of institutions of higher education and how component parts fit together to form the whole (Garcia & Gluesing, 2013; Merriam, 1998). A phenomenological case study approach enabled an investigation into the complex phenomena of faculty professional development while maintaining the intricacies of the specific training case in a holistic manner (Bhattacharya, 2017; Yazan, 2015; Yin, 1994).

The purpose of this chapter is to introduce the methods of the phenomenological case study approach. This chapter will explain the research questions, research approach, and details of the research process.

Research Questions

The purpose of the research study was to understand the faculty experience surrounding participation in online faculty development to more efficiently meet the needs of instructional faculty in higher education. To help achieve this purpose, the goal of the study was to discern how instructional faculty members interpret the complex factors that influence their participation in online professional development. Through rich experience involving faculty development in higher education and an integrative

research review, the following research questions were developed. The primary research question influencing this study is

1. What factors affect higher education instructional faculty members' participation in online professional development training?

The following sub-questions are addressed in the study to obtain more specific information regarding the chosen case:

a. What factors support higher education instructional faculty members completing a university-sponsored online professional development training on accessibility and universal design for learning?
b. What factors impede higher education instructional faculty members from completing a university-sponsored online professional development training on accessibility and universal design for learning?

Research Design

The currently available research related to participation in faculty development has produced a list of reasons why instructional faculty do or do not complete faculty development opportunities offered by their institution, creating a gap in the literature to sufficiently understand the faculty experience of participating in professional development (Austin, 2011; Caffarella & Zinn, 1999; Manduca, 2017). As qualitative methods are used to discover the meanings of an experience (Pietkiewicz & Smith, 2014), qualitative methods were appropriate to address this gap in research.

The central tenet of qualitative research is that researchers are studying the meaning, interpretation, and creation of real experiences (Merriam & Tisdell, 2016). Supporters of the constructivist paradigm of qualitative research argue that realities are

socially constructed through experiences, and, therefore, there is not one reality in which we live (Merriam & Tisdell, 2016). In other words, a person's reality is not provided to them but created by them through their experiences. Further, the epistemological beliefs supporting qualitative research indicate that knowledge is both subjective and constructed, permitting opportunities for diversity in interpretation (Merriam & Tisdell, 2016). Therefore, qualitative researchers aim to advance their disciplines by first analyzing the lived experiences of their participants. As opposed to other paradigms, which begin by establishing ideas, qualitative research only establishes sound theoretical conclusions after exploring participant data.

Phenomenological Case Study

A phenomenological case study (Bhattacharya, 2017; Pietkiewicz & Smith, 2014) was an appropriate research design to understand the internal and external factors that affect instructional faculty members' participation in an online professional development training, as phenomenology is a research method employed to understand a person's lived experiences. In a phenomenological study, researchers ask participants to reflect on a specific experience to make sense of their experiences within their lifeworld so that the researcher can more clearly understand how the person-in-context makes meaning regarding the experience (Larkin & Thompson, 2011), which is differentiated from the physical thing itself (Cohen et al.,2000). Thus, the phenomenology study focused on the experience of faculty members' participation in online faculty development training. Rather than presenting participants with predefined factors, each participant's reflection was evaluated for meanings or experiences that faculty often find natural or

commonplace but enable the research to identify appropriate factors to answer the research questions (Cohen et al., 2000).

Like phenomenology, case studies are a valuable method for gaining an in-depth understanding of a particular experience (Merriam & Tisdell, 2016). Although case studies typically do not focus on studying the experience of a group of individuals, the utilization of phenomenology and case study methods limited the study scope and defined a particular case of study (Bhattacharya, 2017; Merriam, 1998), a university-sponsored accessibility and UDL online professional development training offered to faculty, staff, and graduate teaching assistants. Further, purposive sampling, a common sampling method used by both case study and phenomenological researchers, was utilized to ensure that participants were knowledgeable about the experience in question (Gentles, Charles, Ploeg, & McKibbon, 2015; Pietkiewicz & Smith, 2014). The aim of utilizing both research designs was an in-depth understanding of the individuals studied, and the information is not meant to be generalizable to other populations and environments (Bhattacharya, 2017; Gentles et al., 2015; Pietkiewicz & Smith, 2014; Merriam & Tisdell, 2016).

Phenomenology. Phenomenology began with Edmund Husserl, who desired a more thorough research method that accounted for the external stimuli and context, which affected human phenomena (Laverty, 2003). Through an in-depth evaluation of faculty members' experience in an online professional development training and the use of reflexivity (Cohen et al., 2000; Finlay, 2008; Laverty, 2003) the essence or core of the phenomenon can be discovered (van Manen, 2017). The phenomenological method

provides researchers an opportunity to more holistically explore the phenomenon of faculty professional development.

The research study utilized Smith's (2004) interpretive phenomenological analysis (IPA). According to IPA, everyday occurrences become experiences when an individual reflects, makes sense, and provides significance to the event in question (Smith, Flowers, & Larkin, 2009). The goal of the method is to make sense of a participant making sense of an experience, and is, therefore, a double hermeneutic process (Pietkiewicz & Smith, 2014). Emphasis on the meaning of an experience for a specific individual, or the person-in-context, differentiates IPA from other hermeneutic approaches (Finlay, 2011; Larkin & Thompson, 2011). The researcher can only begin to understand and make sense of the individual's meaning-making after the individual has expressed his or her meaning (Larkin & Thompson, 2011). The interpretation process includes a person's background and language, as these things cannot be separated out from one another and are critical to the overall understanding of the phenomena (Laverty, 2003). Further, consciousness and the individual cannot be separated, and therefore bracketing is impossible (Laverty, 2003; van Manen, 2017). In lieu of bracketing, interpretive phenomenology suggests a continuous reflection process by which the researcher becomes aware of particular biases and utilizes this information throughout the interpretation process (Cohen et al., 2000; Laverty, 2003).

As a method, IPA is defined by the following assumptions:

- An understanding of the world requires an understanding of experience.

- IPA researchers elicit and engage with the personal accounts of other people who are 'always-already' immersed in a linguistic, relational, cultural and physical world.
- We therefore need to take an idiographic approach to our work, in order to facilitate a detailed focus on the *particular*.
- Researchers do not access experience directly from these accounts, but through a process of intersubjective meaning-making.
- In order to engage with other people's experience, researchers need to be able to identify and reflect upon their own experiences and assumptions.
- We cannot escape interpretation at any stage, but we can reflect upon our role in producing these interpretations, and we can maintain a commitment to grounding them in our participants' views (Larkin & Thompson, 2011, pp. 102-103, emphasis in original).

The IPA method is idiographic, interpretive, and interrogative (Smith, 2004). The idiographic nature of IPA requires that researchers conduct (a) a detailed and systematic study of the case and (b) a detailed study of a particular experience for a particular person (Smith et al., 2009). The principle of idiography is demonstrated in the present study through the use of semi-structured interviews related to faculty professional development, with an emphasis on the specific case, a university-sponsored accessibility and UDL online professional development training offered to faculty, staff, and graduate teaching assistants. The use of case study, and thus, acute focus on one particular training enables the development of particular facts through deep analysis, rather than producing general ideas (Merriam & Tisdell, 2016; Smith et al., 2009). After exploring participant data

(i.e., inductive research), the goal of the research study was not to verify a hypothesis but to use data collection and analysis to generate an understanding of the phenomena from the relevant themes. The IPA method is also interrogative, indicating that the data are contextualized within the existing field and literature (Smith, 2004). The process of IPA will be detailed in the data analysis section.

Case Study. Case studies are the preferred method of research when (a) the researcher is asking how or why questions, (b) when the researcher has little or no control over the events, or (c) when the researcher desires to understand a phenomenon in real-life (Yin, 1994). The case study design accompanies the theoretical framework of the study, system theory, as both ideas consider how the complex variables affect the system as a whole, not just the part (Cohen, Manion, & Morrison, 2015; Cousin, 2005; Merriam, 1998). The inductive research questions are written to facilitate the exploration of the factors that influence the completion of online faculty development and are intentionally limited, and focused research questions allowed the discovery of complex relationships and issues (Stake, 2000).

In phenomenology research design, researchers often begin with a case, enabling the comparison and contrast of participants' who have experienced the same phenomena (Pietkiewicz, & Smith, 2014). The case study is also a practical application when studying real people in real situations, as readers can more easily understand the case, assumptions, and implications of the study (Cohen et al., 2015; Cousin, 2005). The case was a university-sponsored accessibility and UDL online professional development training offered to faculty, staff, and graduate teaching assistants.

Cases are also distinguished by specific limits or parameters that occur either naturally (i.e., an online faculty development training) or as a result of sampling. These limits or parameters, known as *bounding* the case, help researchers indicate a clear distinction between participants who are part of the case and those who are not. Purposive sampling is a common sampling method used in case studies to bound the case and in phenomenology research to ensure sufficient knowledge of the experience being studied (Gentles, Charles, Ploeg, & McKibbon, 2015). The phenomenological case study was bounded by faculty who registered for the university-sponsored accessibility and UDL online professional development training between November 2018 and October 2019.

Setting

The setting for this study was a public, four-year, R1 University (http://carnegieclassifications.iu.edu/) in the southern United States. In the 2017 academic year, the university's student population was 30,861. The same year, the university conferred more than 6,000 degrees from 12 colleges. Also, in 2017, the full-time instructional faculty employment count was 1,299, with approximately 37% of the full-time instructional faculty identifying as women and 19% of the full-time faculty identifying as a minority. The average salary for all ranks of full-time instructional faculty in 2017 was $90,361.

An institution of higher education was chosen as the research site because it naturally facilitated the intersection between faculty development and systems thinking. Institutions of higher education provide a conducive research environment due to the complexity of the organizational system (Adham et al., 2015). Only a few studies have

applied a systems perspective to the higher education setting (Adham et al., 2015); fewer still apply systems thinking specifically to faculty development in higher education (Bond & Blevins, 2020). Therefore, the study creates an opportunity to fill this gap in knowledge. It is imperative to understand how all subsystems affect the overall goal at institutions of higher education; focusing on only one subsystem blinds stakeholders to the interrelated contributions that all subsystems generate toward the university's mission (Adham et al., 2015).

An understanding of the research questions at this particular institution was important because the university was recently informed by the Office for Civil Rights that their online presence was not in compliance with the Americans with Disabilities Act. More than 50 higher education institutions were sued due to the accessibility of their public websites that same year (McKenzie, 2018). An agreement between the university and the Office for Civil Rights was developed to have the university's online presence comply with the Americans with Disabilities Act by August 2019. To help execute the agreement at the university level, a committee of campus representatives was formed in December 2017 to evaluate the scope of noncompliance and generate actionable solutions for compliance. One solution, a voluntary four-week, self-paced training focused on designing and teaching accessible courses, was developed as a result of the committee. The training was made available to all faculty, staff, and graduate teaching assistants employed by the university with an active university account. The phenomenological case study was bounded by this university-sponsored accessibility and UDL professional development training offered to faculty, staff, and graduate teaching assistants.

The university committee was made up of campus representatives, including staff from the campus departments such as libraries, Information Technology Services, Strategic Communications, Disability Services, Facility Services, Procurement, and faculty representatives from various colleges across campus. The committee was headed by the Vice Provost for Academic Programs and Support Services. A subset of the committee members formed a subcommittee that was charged with designing and creating a UDL and accessibility training in 2018. The training was not designed or marketed as a university requirement, nor a certification or qualification in either UDL or accessibility. The description available on the university's training website described the offering as instruction on UDL and the laws and standards of accessibility in higher education, common barriers that students with disabilities may face in accessing course content, and basic guidelines and tools for making course content accessible and universal. Faculty, staff, and graduate teaching assistants had the option to register for a blended or online version of the training. The online version of the training was fully asynchronous and only included access to the course developed in the university's LMS. The blended version of the training included the same 10-module online course, as well as an optional synchronous workshop at the end of the training. Participants were given four weeks to complete the training, which required approximately 8-12 hours of work to complete. Both the online and blended formats, as well as the workshop, were facilitated by instructional designers employed in the digital education department, who were available to field questions, provide summaries and overviews of the content, and remind participants of the deadlines for completion.

The asynchronous online course, designed in the university's LMS, was facilitated by instructional designers employed in the digital education department. The course included 10 modules or units of learning. The first module was the "Latest News and Questions" module with a discussion forum for participants to post questions to the facilitator and for the facilitator to send reminders and updates. Module two included the facilitator information, the course syllabus, and an introduction forum. Modules three through eight were the instructional modules. Module nine included the capstone assignment, and module 10 included the participant certificate and a feedback survey.

The six instructional modules (modules three through eight) included instructional materials in the form of text, video, weblinks, lesson activities to facilitate the learning process, auto-graded quizzes for assessment, and discussion forums for interaction with peers and the facilitator. A suggested schedule of activity completion was provided by the facilitator. To progress through the course, participants were required to complete each lesson activity and pass each quiz with at least 70% accuracy. Once participants had progressed through all instructional modules, they were able to complete a capstone project. The capstone project was to evaluate a course, document, website, or similar resource of the participant's choosing and create an action plan for remediating the accessibility compliance issues that were identified. To receive a certificate of completion for the course, participants were required to satisfactorily pass all quizzes, as well as the capstone project.

Offerings of the accessibility and UDL training were included on a university-wide training website where faculty, staff, and graduate teaching assistants could register to participate. The training was also advertised through email blasts, listservs, and

department meetings. Registration was required for participation in the training. After registering for the training, registrants were sent an email with information on how to enroll in the course on the LMS. In total, 279 faculty, staff, and graduate teaching assistants registered for the 11 training offerings that occurred between November 2018 and October 2019. Six of the eleven trainings were facilitated fully online, while the other five were blended.

Study Participants

The sample for this study was drawn from the registrant population of a university-sponsored accessibility and UDL training (*N*=279). Registration for offerings of the training became available to faculty, staff, and graduate teaching assistants in November 2018. Based on information obtained from the training website, of those who registered for the 11 trainings occurring between November 2018 and October 2019, 167 registrants were faculty, 76 were staff, 35 were students (i.e., graduate teaching assistants), and 1 had an unknown status. Sample participants were delimited to full-time instructional faculty at a public, four-year, R1 university in the southern United States who registered for a university-sponsored accessibility and UDL online professional development training between December 2018 and October 2019.

Samples in phenomenological case studies are typically small and homogenous due to the in-depth interviewing and data analysis that accompanies the method (Gentles et al., 2015; Larkin & Thompson, 2011; Pietkiewicz & Smith, 2014; Smith, 2004; Smith et al., 2009). A number of researchers suggest a sample size of between three and 10 participants when using phenomenological methods, with some suggesting no more than six (Creswell, 2002; Morse, 1994; Pietkiewicz & Smith, 2014; Smith, 2004; Smith et al.,

2009), while Creswell (2002) recommends between three and five participants for case studies. These smaller sample sizes ensure the manageability of the in-depth interviews while still allowing for a careful review of the phenomena. Although the main determination in the sample size of qualitative research is typically saturation (Gentles et al., 2015), the goals of phenomenological data collection do not include identifying patterns common among participants (van Manen, 2017), and therefore, the method of the intensity of contact was more appropriate for this study. The intensity of contact varies from study to study and depends on the length of time the researcher spends with each participant, as well as the number of times the participant is contacted to gain a complete understanding of the experience (Cohen et al., 2000). Therefore, based on the specific case in this study and suggestions from other qualitative researchers (Creswell, 2002; Morse, 1994; Pietkiewicz, & Smith, 2014), the anticipated sample size for the study was nine participants.

Participants were identified through multistage sampling. Multistage sampling was appropriate because the population of the case (i.e., the accessibility and UDL online training) included participants who did not meet the scope of this study. Participant homogeneity (Smith et al., 2009) was defined by three factors: (a) full-time instructional faculty, (b) registration for a university-sponsored accessibility and UDL training, and (c) belief that specific factors either support or impede instructional faculty in completing online professional development. Homogeneity of the sample was achieved by recruiting only the registrants of the university-sponsored accessibility and UDL training offered between December 2018 and October 2019, with the designation of “faculty” on the

training website, and who selected “Strongly agree” or “Somewhat agree” to either question one or two, or both, on the orientation survey (Appendix B).

To delimit the accessibility and UDL online training to only full-time faculty members, the first stage of sampling generated a list of all the offerings of the accessibility and UDL online training offerings between November 2018 and October 2019. A total of 11 offerings were identified from this time period, with a total of 279 registrants. Registrant’s name, email address, and employment status were collected from the training website. Five of these offerings were blended offerings, and six were online offerings. Three of the offerings were removed from the initial sample because the three offerings had been combined into one LMS course, and registrants were manually enrolled into the course. The facilitation of these courses was different than the other eight offerings, which each had their own course in the LMS, and the majority of participants had self-enrolled into the course. The exclusion of these offerings removed 39 registrants from the initial sample, 25 of which were faculty.

In the second stage of sampling, registrants not labeled with a faculty employee status (n=112) were removed from the potential participant list. Faculty who registered for multiple offerings (n=14) were also removed from the participant list. Then the registrants with a faculty employee status in an offering between December 2018 and October 2019 (n=119) were divided into three groups based on their completion status of the training. The registered group (n=23) was composed of faculty members who registered for the online training but did not enroll in the LMS course. The enrolled group (n=44) consisted of faculty who registered for the online training, enrolled in the LMS course but did not complete the training. Finally, the completed group (n=52) were

those who registered for the online training, enrolled in the LMS course, and achieved at least 40/50 points, or 80%, on the capstone assignment to receive a certificate of completion for the training, when graded using a rubric. The completion status of the faculty members was gathered from the LMS course. The rubric used to define the completion status was an original part of the course design and was not developed or scored for the research study.

The aim of sampling in phenomenology is to identify participants who have knowledge of the experience (Pietkiewicz, & Smith, 2014; Smith et al., 2009; van Manen, 2017), who wish to discuss the experience, and who have diverse perspectives regarding the experience (Laverty, 2003). Therefore, the orientation survey was used to identify faculty members to participate in interviews. As all individuals in the case registered for a university-sponsored accessibility and UDL online professional development training between December 2018 and October 2019, they have knowledge of the phenomena. To indicate a willingness to discuss the phenomena, all faculty members generated from the second stage of sampling were contacted with an invitation to participate and complete a brief orientation survey through Qualtrics (Appendix B). In an effort to ensure that the experience of participation in an online faculty development training was completely understood through multiple perspectives, it would have been ideal to have three participants from each completion status group (Englander, 2012; Smith et al., 2009). Nineteen faculty members completed the orientation survey. Ten of those faculty indicated an interest to participate in an interview. Of the faculty members who indicated an interest in participating in an interview, six were in the completed group, four were in the enrolled group, and one was in the registered group.

Ethics in Qualitative Research

The inclusion of informed consent, the opposition of deception, privacy and confidentiality, and accuracy (Christians, 2000; Stake, 2000) are central to conducted ethical research. In keeping with these research ethics, informed consent and confidentiality of participants were upheld throughout the research process. Accuracy has been maintained through the reporting of the findings.

Informed consent is a process by which the researcher counteracts the act of deception by providing prospective participants with the purpose, process, and intent of the research study (Brinkmann & Kvale, 2017). As required by the United States Department of Education Code of Federal Regulations Title 34-Protection of Human Subjects, participants were required to indicate consent before participating in the study (U.S. Department of Education, 2017). The use of Signed Certificate of Informed Consent forms was waived in the Institutional Review Board (IRB) process in lieu of a Consent Script that was read to each participant before the start of the interview (Appendix C). The Consent Script detailed the research purpose, design and procedures, and potential risks and benefits. Consent language was also included in the orientation survey.

Participant confidentiality helps ensure that information gained and published throughout the research process cannot be immediately correlated to a specific individual without additional information or access. Although the overall risks of participation in the research study were low, the confidentiality of participants was maintained through the use of pseudonyms (Hadjistavropoulos & Smythe, 2001). Participants were free to exit the study at any time at no risk.

Procedure

An IRB application was completed and approved by both the research site and Sam Houston State University (Appendix D). Approval to access registrant information from the research site's training website and completion status from the site's LMS was obtained from the vice president of the unit that created the training (Appendix E).

Participants were identified through multistage sampling. The population was delimited to full-time faculty members who registered for an online accessibility and UDL training between November 2018 and October 2019. The first stage of sampling generated a list of all the offerings of the accessibility and UDL online training between November 2018 and October 2019 (see Table 1). A total of 11 offerings were identified from this time period, with a total of 279 registrants from 95 university departments. Three of the offerings were removed from the initial sample because the three offerings had been combined into one LMS course, and registrants were manually enrolled into the course. The facilitation of these courses was different than the other eight offerings, which each had their own course in the LMS, and the majority of participants had self-enrolled into the course. The exclusion of these offerings removed 39 registrants from the initial sample, 25 of which were faculty. Therefore, eight offerings between December 2018 and November 2019 were included in the study.

Table 1

Offerings and number of registrants in the first stage of sampling of the university-sponsored accessibility and UDL training

Offering No.	Offering Dates	No. of Registrants
1	November 5, 2018 – November 25, 2018	7
2	November 5, 2018 – November 25, 2018	15
3	November 26, 2018 – December 2, 2018	17
4*	December 3, 2018 – December 16, 2018	66
5*	January 21, 2019 – February 18, 2019	32
6*	March 11, 2019 – April 8, 2019	15
7*	May 6, 2019 – June 3, 2019	15
8*	June 17, 2019 – July 15, 2019	16
9*	July 22, 2019 – August 19, 2019	29
10*	August 26, 2019 – September 23, 2019	20
11*	October 7, 2019 – November 4, 2019	47

Note: The offerings with asterisks (*) were included in the study.

The second stage of sampling removed registrants who were not labeled with a faculty employee status (n=112) from the participant list. One-time registrants with a faculty employee status in the eight offerings that took place between December 2018 and October 2019 (n=119) were divided into three groups based on their completion status of the training: registered (n=23), enrolled (n=44), or completed (n=52).

All registrants with a faculty employee status in the eight offerings between December 2018 and October 2019 were contacted via Qualtrics' mail distribution system

with an invitation to participate in the study and complete a brief orientation survey (Appendix B). The orientation survey was open for 17 days. A reminder email was sent to all unfinished respondents one week after the initial distribution (Appendix F). An additional reminder email was sent to unfinished respondents in the registered group 12 days after the initial distribution due to a low response rate in this group.

Phenomenological research desires a homogenous sample (Gentles et al., 2015; Larkin & Thompson, 2011; Pietkiewicz & Smith, 2014; Smith, 2004); therefore, participant homogeneity in this study was defined by three factors: (a) full-time instructional faculty, (b) registration for a university-sponsored accessibility and UDL training, and (c) belief that specific factors either support or impede instructional faculty in completing online professional development. Homogeneity of the sample was achieved by only including study participants who registered for the accessibility and UDL online professional development training between November 2018 and October 2019, were full-time faculty members as defined by the study, and who selected "Strongly agree" or "Somewhat agree" to either or both of the following questions:

1. To what extent do you agree with the following statement? There are specific factors (i.e., personal, organizational, environmental, etc.) which help support instructional faculty in completing online professional development.
2. To what extent do you agree with the following statement? There are specific factors (i.e., personal, organizational, environmental, etc.) which impede instructional faculty from completing online professional development.

The full orientation survey is included in Appendix B. Ten of the survey respondents who met the study's sample criteria indicated an interest to participate in a semi-

structured interview. Of the faculty members who indicated an interest in participating in an interview, five were in the completed group, four were in the enrolled group, and one was in the registered group.

Ten faculty were invited to participate in a semi-structured Zoom interview. The study participants were contacted via their university email address and asked to participate in the semi-structured interview(s) as part of the research study (Appendix F). Using email to contact participants may have decreased the number of responses received due to the number of daily emails received by the potential participants (Sappleton & Lourenço, 2016). Each participant was contacted a total of three times. If the sample participant did not respond after the third attempt to schedule the interview, no more emails were sent that to the faculty member. Of the 10 faculty contacted, nine interviews were conducted: four from the completed group, four from the enrolled group, and one from the registered group.

Once each interview was scheduled, the participants were assigned a pseudonym. The pseudonym was used to identify the transcript, field notes, research journal and data analysis for each participant. All initial interviews were conducted between September and October 2020. Consent to participate in the interview and to have the interview recorded was obtained from the participants before the beginning of each interview. Each interview was recorded and transcribed using Zoom. Field notes were taken during and directly after each interview. The transcript files were downloaded from Zoom and edited in Microsoft Word for accuracy. All transcripts and recordings were downloaded from Zoom and stored on a password protected external hard drive and then deleted from the Zoom account. Throughout the research process, a research journal was used during

the data collection process and to support data analysis by identifying researcher bias before and, as well as organizing changing perspectives and interpretations (Cohen et al., 2000; Laverty, 2003).

Data Collection

Semi-structured interviews, a common method of data collection in phenomenology (Gill, Stewart, Treasure, & Chadwick, 2008; Larkin & Thompson, 2011; Pietkiewicz & Smith, 2014; Smith, 2004), with full-time faculty who registered for an accessibility and UDL online training between December 2018 and October 2019 was the main source of data collection in this research study. Other sources of data include the orientation survey, field notes, and the research journal. Field notes consisted of observations and notations recorded during and immediately following the live interviews. The research journal was used continuously before, during, and after the research study to reflect on data, address researcher bias, and consider ideas and relationships. The recognition of multiple perspectives and realities is central to qualitative research, and utilizing interviews as a data collection method provides detailed descriptions and interpretations from a variety of subjects (Stake, 1995).

The orientation survey was primarily used as a recruitment tool, but it also collected data from faculty who registered for an accessibility and UDL online training between November 2018 and October 2019. Nineteen surveys were completed and submitted, and two surveys were submitted blank. On the orientation survey, ten faculty indicated a willingness to participate in an interview. These ten faculty were contacted via their university email to schedule the interview. Nine interviews were scheduled.

Prior to the data collection, an informal, semi-structured qualitative interview protocol, located in Appendix C, was developed to guide the interviews. The interview protocol helped to promote a more natural interview between myself and research participants (Pietkiewicz, & Smith, 2014). The questions asked were intentionally open in nature (Laverty, 2003) to aid in the exploration of a variety of meanings (Larkin & Thompson, 2011). In drafting the interview protocol, an integrative literature review (Onwuegbuzie, Leech, & Collins, 2010) and question matrix (Appendix G) were performed to ensure deliberate alignment between the literature, the research questions, and interview questions.

Virtual semi-structured interviews were scheduled with nine faculty between September and October 2020 based on the faculty's availability. The web conferencing tool Zoom was used to facilitate and record the audio and video for each interview. Although data on the use of technologies such as Zoom in qualitative data collection is limited (Archibald, Ambagtsheer, Casey, & Lawless, 2019), studies evaluating the method have shown many advantages for both researchers and participants, such as convenience and rapport (Archibald et al., 2019; Mirick & Wladkowski, 2019). The use of Zoom to facilitate the interviews for this study was necessary for the health and safety of all individuals, as the interviews took place during the COVID-19 pandemic. Calendar invitations that included the purpose of the interview and the Zoom meeting information were shared with each faculty member's institutional email address. Each initial interview lasted between 30 and 90 minutes. A consent script was read to each participant, and participants were prompted to give verbal consent of the interview and its recording both before and during the interview.

At the end of the initial interview, each participant was informed that there might be an opportunity for a follow-up interview following initial data analysis. As the sample size (*n*=nine) for the research study was on the larger end of sample sizes for phenomenological research, and we were discussing a past event (Cohen et al., 2000), it was not anticipated that multiple interviews with each participant would be necessary. However, based on initial data analysis, follow-up interviews with some participants were determined to be necessary to fully understand the participants' perspective of the phenomena (Larkin & Thompson, 2011) or elicit further details regarding the content (Rubin & Rubin, 2012). After initial data analysis, four participants were invited to participate in follow-up interviews to clarify information collected in the initial interview or gather additional information related to the research questions. All participants agreed and participated in the follow-up interviews, which took place between December 2020 and January 2021 and lasted between 30 and 60 minutes.

As accurate transcripts are a critical component of conducting a phenomenological study (Cohen et al., 2000; Larkin & Thompson, 2011; Pietkiewicz & Smith, 2014; Smith et al., 2009), mechanical transcript files of the digital audio recordings were rendered directly through Zoom and then edited for accuracy. Each transcript file was then formatted to include a transcript summary, key words, and the interview transcript. This document was sent to each participant via public key infrastructure encrypted email for informal member checking for the purpose of giving participants the opportunity to correct errors, provide additional information, and assess their intent in behavior and conversation (Lincoln & Guba, 1985). Each participant

received their interview transcript and had a one-week period to review the transcript to clarify any information or interpretations (Appendix F).

Additional data sources can be useful during data analysis (Smith et al., 2009); therefore, data collected for this qualitative study also included field notes and a research journal. Field notes were also written during and immediately after each interview, and included observations taken directly from each interview (Cohen et al., 2000). Notes were recorded in a research journal at disparate points throughout the research study. The research journal notes consisted of follow-up questions to ask participants, common themes or ideas that were evident during the interview, and reflections on how the data answered the research questions (Cohen et al., 2000). The research journal was also a useful method for identifying bias before and during the data collection process (Cohen et al., 2000; Laverty, 2003). The field notes and research journal were then incorporated into the transcript summary and were used during the data analysis.

Field notes, research journal, printed transcripts, and audio recordings will be stored on a password protected external hard drive in a personal file cabinet that is locked and not accessible by others for a period of three years after the commencement of the research study.

Trustworthiness Issues

The trustworthiness of qualitative research is dependent on the researcher, as the main instrument of data collection throughout the research study (Merriam & Tisdell, 2016; Patton, 1990). The trustworthiness of the researcher is exhibited through her ability to conduct a research study in a credible manner (Merriam & Tisdell, 2016). Trustworthiness strategies specific to the research paradigm (Morrow, 2005) included a

clear understanding of the methodological tenets, a clear experience to study, application of phenomenological data analysis methods, description of the experience, and researcher reflection (Creswell, 2007).

A researcher can present herself as credible throughout the research process by exhibiting ethical behavior. Ethics includes informed consent, the opposition of deception, privacy and confidentiality, and data accuracy (Christians, 2000; Stake, 2000). Informed consent and confidentiality of participants were upheld throughout the research process. The consent script included the purpose of the study, the estimated time to complete the interview, and details on how the information will be used in the study (Creswell, 2007).

Throughout the research study's data collection and analysis, considerations for fairness included limiting researcher bias and subjectivity. Common methods of addressing or identifying researcher bias present in research, whether quantitative or qualitative, include bracketing and research journals (Morrow, 2005). As bracketing is not appropriately aligned with hermeneutic phenomenology, a research journal was a more appropriate method of identifying bias for this study (Cohen et al., 2000; Laverty, 2003; van Manen, 2017). A common strategy for the concern of representation is member checks. Asking participants for clarification during the interviews was another strategy that increased the fairness of the author, as it ensures that the research is representative of the participants.

Measures of credibility determine if the findings of the research study are consistent with reality (Merriam & Tisdell, 2016). Therefore, member checks, a common qualitative strategy for ensuring internal validity, were utilized in this study (Creswell,

2007; Merriam & Tisdell, 2016). Informal member checks, in the form of providing the interview transcript to the participant, allowed the participant an opportunity to correct errors, provide additional information, and assess their intent in behavior and conversation (Lincoln & Guba, 1985). Participants received a copy of their interview transcript via public key infrastructure encrypted email and were given a seven-day period to review the interview transcript for accuracy and palatability and offer feedback, although it was not promised that their feedback would be incorporated (Stake, 1995). One participant responded to the member check to confirm that she accepted the information. If no response was received after seven days, it was assumed that the participant had accepted the accuracy of the transcript.

Data Analysis

Data were collected from nine faculty members who participated in a university-sponsored accessibility and UDL training. The data of eight faculty, four from the completed group and four from the enrolled group were selected for analysis. The data from the study participant in the registered group was not analyzed for this study, as the group had only one participant. The data was analyzed using the IPA method of data analysis.

Data analysis in hermeneutic phenomenology is deduced in part from the hermeneutic circle, which realizes that "to understand any given part, you look to the whole; to understand the whole, you look to the parts" (Smith et al., 2009, p. 28). The interpretive nature of IPA requires a consideration of how bits of data build to create a more complex and complete experience (Cohen et al., 2000; Smith et al., 2009). The steps of the data analysis as outlined by Smith et al. (2009) include

1. reading and re-reading
2. initial noting
3. developing emergent themes
4. searching for connections across emergent themes
5. moving to the next case
6. looking for patterns across cases

In the first four steps of the data analysis, the interview transcripts, research journal, and field notes were analyzed. Each transcript was copied into a table with three columns: emergent themes, original transcript, and exploratory comments. Each table was printed on legal paper, and color-coded pens were used to denote the different types of noting methods on the transcripts. Initial noting, or the process of free writing in relation to themes or passages of interest, was used during this early stage to draft exploratory notes that were descriptive, linguistic, and conceptual. Descriptive commentary included general commentary and described things of importance to the participant (i.e., objects or events). Linguistic comments focused on the language the individual used to describe their experience. Conceptual notes were an interrogative view of what things mean or what connections may exist (Smith et al., 2009).

Once the data was expanded through initial notetaking, the third step in the data analysis process shifted to reducing the newly expanded data into emerging themes. The assignment of themes included the process of interpreting the exploratory comments and the participants' experience (Smith et al., 2009). Both emic (i.e., the perspective of the actor) and etic (i.e., the perspective of the researcher) perspectives were used to develop these emerging themes (Pietkiewicz, & Smith, 2014). The fourth step in the data analysis

was to discover the connections between the themes that emerged in step three. The emergent themes were organized using a mind map to show the relation to one another. It was at this point that decisions regarding a follow-up interview were made. Participants were selected for a follow-up interview if there was information collected in the initial interview that needed to be clarified or if additional information needed to be gathered regarding their experiences in online professional development (Larkin & Thompson, 2011; Rubin & Rubin, 2012). Four follow-up interviews were conducted and analyzed in the same way.

Once a mind map was completed for one data set (i.e., an interview transcript, research journal, and field notes) step five began the process again (i.e., steps one through four) with a different case or interview.

After all cases were analyzed via Smith et al. (2009) systematic data analysis method, master lists of all themes within a single case were created in order to look for patterns and connections across cases (Smith et al., 2009). The product of the data analysis is a clearer understanding of how participants make sense of their experience, as well as my interpretation of the experience as the researcher (Miller, Chan, & Farmer, 2018; Smith et al., 2009).

Summary

The purpose of this chapter was to introduce the methodology of the phenomenological case study approach and to explain the research questions, research approach, and details of the research process. A phenomenological case study research design was determined to be an appropriate research method to address a gap in the literature to understand the faculty experience of participating in professional

development (Austin, 2011; Caffarella & Zinn, 1999; Manduca, 2017). Considerations for ethics, reliability and validity, and trustworthiness in qualitative research were discussed, as well as specific issues and solutions related to the study. The chapter closed with a discussion of the data analysis method, IPA. The findings chapter includes an overview of the analysis process, participant profiles, a list and description of the super-ordinate themes discovered from the research analysis, and excerpts from the interviews to illustrate the themes (Smith et al., 2009).

CHAPTER IV

Findings

The following chapter contains the findings of the phenomenological case study discovered using the IPA method's analysis and interpretation steps. Five super-ordinate themes emerged from the data analysis process, which are presented here with their relevant codes. A brief profile of each participant is offered followed by a discussion of the findings.

The purpose of the research study was to understand the faculty experience surrounding participation in online professional development. A phenomenological case study design was used to discover the complex structures that influence instructional faculty members' participation in online professional development.

The primary research question that influenced this study is

1. What factors affect higher education instructional faculty members' participation in an online professional development training?

The following sub-questions were addressed in the study to obtain more specific information regarding the chosen case:

a. What factors support higher education instructional faculty members to complete a university-sponsored online professional development training on accessibility and universal design for learning?
b. What factors impede higher education instructional faculty members from completing a university-sponsored online professional development training on accessibility and universal design for learning?

Data Collection

Purposive multistage sampling was used to identify participants. The population was delimited to full-time faculty members who registered for a university-sponsored accessibility and UDL training between November 2018 and October 2019. A list of all the accessibility and UDL training offerings between November 2018 and October 2019 was generated during the first stage of sampling. Three of the offerings were removed from the initial sample because the three offerings had been combined into one LMS course, and registrants were manually enrolled into the course—a process different than the other eight offerings. During the second stage of sampling, I divided one-time registrants with a faculty employee status in the eight offerings that took place between December 2018 and October 2019 (n=119) into three groups based on their completion status of the training: registered (n=23), enrolled (n=44), or completed (n=52). Registrants were contacted via Qualtrics' mail distribution system with an invitation to participate in the study and complete a brief orientation survey. Nineteen faculty members completed the orientation survey. On the orientation survey, 10 respondents indicated an interest in participating in an interview. These 10 faculty included six from the completed group, four from the enrolled group, and one from the registered group.

In addition to indicating an interest in participating in an interview on the orientation survey, faculty had to meet three criteria to participate in the study: (a) full-time instructional faculty, (b) registration for a university-sponsored accessibility and UDL training, and (c) belief that specific factors either support or impede instructional faculty in completing online professional development as indicated on the orientation survey. All 10 faculty who indicated an interest in participating in an interview on the

orientation survey met these criteria and were contacted to participate in an interview. Nine of the faculty responded to the email invitation to participate in an interview; one faculty from the completed group did not respond to the request for an interview. Therefore, nine interviews were scheduled: four from the completed group, four from the enrolled group, and one from the registered group. All initial interviews were conducted between September and October 2020.

Semi-structured interviews with nine full-time faculty who registered for an accessibility and UDL online training between December 2018 and October 2019 was the primary source of data collection in this research study. Other sources of data included the research journal and field notes. Data was analyzed according to the steps detailed in the data analysis section below.

Participants

Full-time instructional faculty at a single four-year research university in the southern United States who registered for an online faculty development training on accessibility in course design between December 2018 and November 2019 were recruited for this study. During recruitment, faculty were divided into three groups based on their completion status of the training. Pseudonyms were assigned to each faculty once they agreed to participate in the research study. The data analyzed included transcripts from eight participating faculty members, four faculty from the enrolled group and four faculty from the completed group (Table 2). Brief profiles of the participating faculty members follow.

Table 2

Participants in the study, by group

Name	Group
Joseph	Enrolled
Michael	Enrolled
Sora	Enrolled
Tara	Enrolled
Daniel	Completed
Matthew	Completed
Rey	Completed
Ruby	Completed

Enrolled group. Members of the enrolled group consisted of faculty who registered for the online university-sponsored accessibility and UDL training, enrolled in the LMS course but did not complete the training. Completion of the training would have required passing all quizzes with at least 70% accuracy and achieved at least 40/50 points, or 80%, on the capstone assignment when graded using a rubric.

Joseph. Joseph was a landscape architecture professor, and his main responsibilities included teaching, research, and service. Teaching was Joseph's primary responsibility, although he also served on several committees at the department, college, and university levels and completed research and publications. When asked which of the duties was most important to him, Joseph remarked, "Well, I'm here because I want to teach."

Joseph defined professional development as more of a formal event—when someone developed a presentation on a particular topic of interest from which the audience can gain knowledge. However, Joseph has struggled with finding value in those types of opportunities, and, therefore, he no longer chooses to seek out formal professional development. Instead, Joseph found informal professional development,

including talking to colleagues, trial and error, or one-on-one consultations to be more beneficial.

Michael. Michael was a professor and associate dean at the university and, therefore, taught one course a year and handled student affairs, recruitment, and scholarships for the college. Michael's most important responsibility was the student relations aspect of his job because he wanted to see students succeed and provide the same level of care and respect that people showed to him when he was a student.

To Michael, professional development was "something that enhances your ability to either do your current job or your potential future jobs." Michael did not seek formal professional development because he felt well established in his current position, and he did not feel there were many opportunities relevant to his job responsibilities. However, he would occasionally participate in training to help guide other faculty.

Sora. Sora was an instructor and taught mainly large survey writing courses, although she also taught several other courses, including technical writing and legal writing. Her primary responsibilities at the university included teaching and service. Although research was not part of her job responsibilities, Sora tended to engage in research and publishing to develop her content knowledge and increase her credibility with her students and employer.

Sora defined professional development as developing her skillsets and "figuring out how they might fit into teaching a particular class or making [her] more credible as an expert in that area." She participated mainly in informal professional development opportunities, preferring to interact with colleagues on social media, reflect on her trial and error, or participate in various service activities. Sora stressed that it was essential to

include all of her development activities in her annual report because she refused to let her department and the university ignore her.

Tara. Tara was a library and information science professor, and her main responsibilities included teaching, research, and service. Included in these responsibilities, Tara taught two courses in the fall and spring semesters, advised students, and served on various committees, including a university-wide technology committee. Of those responsibilities, research was both the most prominent and most important to Tara. When asked why research was her most important responsibility, she stated, "the research is what informs my teaching, and the research is what informs other people's teachings."

Tara viewed professional development as developing skills, such as pedagogical skills. The majority of the professional development that Tara engaged in was informal and consisted of reading, serving on organizational boards, and talking to colleagues.

Completed Group. Members of the completed group registered for the online university-sponsored accessibility and UDL training, enrolled in the LMS course, and achieved at least 40/50 points, or 80%, on the capstone assignment when graded using a rubric.

Daniel. Daniel was an associate professor and head of one of the professional development organizations at the university. Teaching was the most important of Daniel's responsibilities, and when asked why, he quickly answered, "Oh, that's easy. Because I enjoy it." Daniel's main responsibilities included teaching high-enrollment introductory courses and research.

Daniel's professional development experiences were unique because he was often the one organizing and hosting rather than registering and attending. However, when asked about the impact of organizing professional development for others, Daniel said, "organizing and running [a training] is also professional development for me because there's always something that I learn during that process about teaching." Daniel organized and participated in several formal professional development opportunities a year and engaged in informal professional development, including talking with colleagues and reading books and articles.

Matthew. Matthew was an instructor in agriculture, where he also advised undergraduate students and served as a student organization advisor. Teaching was the most important responsibility to Matthew, and more specifically, he saw his most important responsibility as interacting with the students.

Matthew participated in a balanced amount of formal and informal professional development opportunities, including workshops, talking with colleagues, and professional consulting.

Rey. Rey was an associate professor of sociology, and his primary responsibilities included teaching, research, and service. Rey taught two classes a semester, advised students, and served on various department and college-level committees. Teaching was the most important responsibility to Rey because he found it the most engaging of his responsibilities.

Rey viewed professional development as refining skills to make it easier to do one's job, especially presentation skills. Rey participated in a proportional amount of

formal and informal professional development but found it difficult to balance professional development with the demands of his other duties.

Ruby. Before becoming an instructor, Ruby was a long-time public relations professional. At the time of the interview, Ruby was an instructor and internship coordinator at the university. Ruby's main responsibilities included teaching and service. These responsibilities included teaching two courses in the fall and spring semesters, advising a student organization, and serving on several committees. Ruby considered teaching to be her primary responsibility and her most important role at the university because "it's my obligation to find new people to work in the profession since I'm not working in the profession anymore."

Ruby participated in a plethora of professional development, both pedagogical and professional. Maintaining professional accreditation, organizational memberships, and professional contacts benefited her performance as an internship coordinator as she relied on that knowledge to assist students. Further, she felt an obligation to seek pedagogical training since she did not identify as an academic. Ruby participated in at least one formal professional development opportunity every semester but often attended more, including workshops, learning communities, professional conferences, and organizational board meetings and activities.

Data Analysis

The data of eight faculty, four from the completed group and four from the enrolled group were selected for analysis. There was a low response rate from the registered group (n=2) to the orientation survey, and only one faculty agreed to an interview. Phenomenology methods in human sciences recommends the use of at least

three participants to allow the researcher a more complete understanding of the experience (Englander, 2012; Smith, Flowers & Larkin, 2009). As three participants in the registered subgroup was not achieved, the registered group study participant's data were not analyzed for this study because there would have been a lack of representation in the analyzed data and findings from this group.

Data were analyzed using the six-step IPA method (Smith et al., 2009). Interviews were recorded and transcribed using Zoom and edited in Microsoft Word for accuracy. Preliminary data analysis occurred during transcription by recording thoughts and ideas in the research journal. In the first four steps of the data analysis method, the interview transcripts, researcher journal, and field notes were analyzed. IPA is a double hermeneutic method, and therefore, the initial steps were meant to explore not only the explicit meaning of the participant but also my interpretation as the researcher. After the initial noting process, the data set included the original transcript and my initial notes, and this data set was used to develop emergent themes.

Deductive and inductive coding were used to develop the emergent themes. Deductive codes were taken from Caffarella and Zinn's (1999) conceptual framework on factors that support and impede faculty professional development. Emergent themes that could not be included or explained under Caffarella and Zinn’s definitions were given an inductive code relative to the core issue. Over 50 unique emergent themes were recorded from the interview transcripts. Once the emergent themes were recorded for an interview, it was determined if a follow-up interview was necessary to clarify information from the initial interview or gather additional information related to the research questions. Michael (E), Joseph (E), Tara (E), and Daniel (C) were asked to participate in

a follow-up interview. Four follow-up interviews were conducted, and the transcripts were analyzed using the same steps used for the initial interviews.

The process of developing emergent themes and finalizing the super-ordinate themes was iterative. Therefore, super-ordinate themes were developed through the processes of abstraction and subsumption, combining, renaming, and removing original emergent themes. In these processes, similar codes were grouped and given a new super-ordinate theme, and original codes (e.g., training and facilitation) were occasionally promoted to a super-ordinate theme to group several smaller codes. Research findings from Caffarella and Zinn (1999) and Mezirow (1997) were applied in naming and defining the super-ordinate themes. Continuous reading and re-reading of codes and transcript excerpts were used to ensure the validity of codes and themes.

Super-Ordinate Themes

The final super-ordinate themes and relevant codes (Table 3) are presented here in detail with excerpts from the participants. Participant names are followed with a letter indicating their group. For example, the notation Matthew (C) indicates that Matthew was in the *completed* group, while Joseph (E) indicates that Joseph was in the *enrolled* group.

Table 3

Super-ordinate themes and associated codes

Super-Ordinate Theme	Definition	Relevant Codes
Institutional Structures	"formal and informal structures within the educational context" (Zinn, 1997, p. 19)	Mandate Support Incentives and rewards Available training
Training & Facilitation	the components and qualities of faculty professional development	Training mode Training design Training content Training facilitation Training outcomes
Professional Considerations & Commitments	the circumstances and events that are associated with being hired as a faculty member in higher education	Workload Increased work responsibilities Relevance and interest Credibility
Personal Considerations & Commitments	"the circumstances or events in our private lives which affect our ability to focus emotional or physical energies on our professional endeavors" (Caffarella & Zinn, 1999, p. 245)	Increased home responsibilities Major life event
Frames of Reference	an adult's thoughts, behaviors, and emotions developed from their habits of mind and points of view (Mezirow, 1997)	Learning preferences Belief in continued development Perception that faculty can make a difference in the lives of students Perception that faculty can make a difference in the lives of other faculty

Theme 1: Institutional Structures. The categories of Caffarella and Zinn's (1999) conceptual framework on factors that support and impede faculty professional development were first defined in Zinn (1997). Zinn (1997) defined institutional

structures as “formal and informal structures within the educational context” (p. 19). For this study's purposes, only codes that were interpreted as being in direct control of the institution were included under the theme of institutional structures. Participant excerpts grouped under the theme institutional structures were all recorded from the perspective of the institution. For example, participants shared experiences regarding the incentives, support, and training that the university provided.

The institutional mandate appeared to be the only incentive provided to faculty for participating in faculty professional development. All eight participants, 100%, noted a lack of incentives for participation in professional development from the university. Michael (E) stated, “I’m not sure the university recognizes anything you do professional development wise.” However, six participants, three from each group, also verified that they completed the university-sponsored accessibility and UDL training or other training due to a university mandate.

Additionally, three participants, 75%, from the enrolled group felt that the university did not provide professional development relevant to their needs. Providing and mandating training is only half of the support that faculty require. All faculty participants from the enrolled group also experienced a lack of institutional support to apply training principles effectively. This lack of institutional support, especially related to the university-sponsored accessibility and UDL training, appeared to make faculty feel frustrated and isolated.

Mandate. Six of the eight participants, 75%, mentioned the institution’s mandate for accessible courses as a main factor in registering for a university-sponsored accessibility and UDL training. Having been informed by the Office for Civil Rights that

the university's online presence was not in compliance with the Americans with Disabilities Act, an institutional mandate was issued that the online presence, including online course materials, must comply with the Americans with Disabilities Act by August 2019.

Five participants, three in the enrolled group and two in the completed group, first discussed the commitment of accessible course materials from the university's perspective. In other words, phrases such as the "[university] had made the commitment [to accessibility]" (Tara, E) and it "was the direction the university was trying to focus on" (Michael, E) were stated initially, with phrases such as "of course, I do want my courses accessible" (Tara, E) stated later in the interview. Another participant, Rey (C), immediately referenced the benefits to his teaching and students when asked about the training. At some point in their interviews, 100% of participants suggested that they understood and agreed with the institutional mandate on accessibility from a legal, financial, or ethical perspective.

Another difference among participants that was discovered was the perception of what the university was mandating. Ruby (C) associated the institutional mandate with the university-sponsored accessibility and UDL training. She stated that the institution required her to take an accessibility class, and "the fact that it was mandatory" was the main reason for completing the training. The other five faculty associated the mandate with the accessibility of their university courses, and the training enabled them to fulfill that requirement. Joseph (E) concluded

> My understanding, my recollection, and understanding at the time is that it was required. Well, the requirement was that I had to make my courses accessible, and

> I didn't know what that meant and how to do it. So in a sense, I had to…at least take part of the class to know how to do it. The requirement of making your courses accessible was mandated by the university. The course enabled me to know how to fulfill that.

Along with the accessibility mandate, Title IX and state ethics training were two other university-mandated trainings mentioned by participants. In general, Michael (E) viewed institutional mandates as the reason why faculty completed professional development of any kind. He stated, "I think [faculty] do professional development because we have to."

The institutional mandate of accessible courses was mentioned by six of the participants, 75%, as impacting their participation of the accessibility and UDL training. One participant associated the mandate with completing the university-sponsored training. The other participants associated the mandate with the remediation of their course materials.

Support. Participants interpreted institutional support as assistance from the university to complete their job responsibilities effectively. Joseph (E), Michael (E), Sora (E), and Tara (E), the enrolled group participants, discussed the institutional support provided to faculty for meeting the university's accessibility standards. Participants felt that if the university issued the mandate, the university should assist the faculty in meeting the policy.

Although the university offered training related to accessibility and UDL, the faculty did not feel supported. Tara (E) shared that one reason for not feeling supported was a lack of communication from administrators. Secondly, Michael (E) remarked that the university claimed it would assist faculty with remediating course materials, but these

resources were never provided. Sora (E) argued against the need for training if there was no support to apply the information shared with faculty. Joseph (E) was not dissatisfied with the lack of institutional assistance but suggested that faculty should have been compensated for their time and effort in making course content accessible.

The lack of institutional support was not only frustrating for faculty, but it also meant an increase in work responsibilities for some. Sora (E) was angry because she felt that "the university is just shifting the responsibility of accessibility over to [the faculty]. And some of the things they want us to do, these things are time-consuming, and they're not giving us any help." Rather than using institutional support, Michael (E) made the decision to organize a faculty support group to assist faculty in his college. As he explained, "the university was supposed to be providing [resources to remediate course materials], is what we were told. We didn't wait on those, and it's a good thing we didn't because the university never did provide those resources."

The participants in the study perceived a lack of support by the institution in helping faculty with the accessibility of their course materials. The work that the faculty was being asked to do was time-consuming for them and their colleagues. Only members of the enrolled group spoke about this issue.

Incentives and Rewards. A third institutional structure that affected faculty was incentives and rewards. An incentive is the promise or expectation of a reward to motivate or encourage, while a reward is the provision of the incentive (Harackiewicz & Sansone, 2000). Participants in both the enrolled and the completed groups recognized a lack of incentives and rewards provided by the institution related to professional development. The lack of incentives and rewards did not appear to be a significant

barrier to faculty participation. Still, institutional incentives and rewards could have served as a support mechanism for participation in faculty development (Dailey-Hebert et al., 2014; Sabagh & Saroan, 2014; Wood, 2015). As Daniel (C) stated, “Institutionally, there are not a lot of barriers, but also, I don't think there are many incentives.”

One hundred percent of the participants mentioned a lack of incentives and rewards for the university's professional development activities. The participants presented a resigned attitude regarding institutional incentives for professional development. The culture of a lack of institutional incentives and a lack of emphasis on professional development seemed to be an accepted norm. Ruby (C) was not even confident that anyone looked at her professional development activities, even though she was required to list them on her annual report. For participants in the study, participation in faculty professional development was more about intrinsic rewards than extrinsic rewards, but that did not mean that extrinsic rewards would not be welcomed by the participants.

The appropriate type of extrinsic rewards may be a differentiating factor between completion and non-completion of faculty development. Sora (E) remarked that “If my pay increased as a result [of participating in professional development], I'd be looking for any kind of professional development things I could attend, whether or not they really interested me.” Tara (E) and Matthew (C) shared that while rewards would be pleasant, they were not the main factor for participating. Tara (E) asserted, “I just don't need the certificate. . . .Nobody asked me when I went up for promotion to full professor if I had completed that course,” and Mathew (C) agreed, saying, “[a reward] would be nice. But that’s not the reason I do it.” However, Tara (E) completed an online grants workshop

that she was given a stipend to attend, even though she mentioned the workshop included hours of content that was not relevant to her.

Daniel (C) and Sora (E) provided insight into the types of tangible institutional incentives and rewards that faculty might find valuable. Daniel (C) commented that faculty are "driven by those factors, which they feel are valued in terms of tenure and promotion. And they're driven by money." Sora (E) specified that the institution could incentivize instructors by trading a certain number of professional development opportunities for a course release every few years. Rey (C) would have appreciated recognition for his efforts.

Michael (E) and Daniel (C) both expanded the conversation about incentives to discuss the need for a professional development culture at the institution, where faculty viewed professional development as valuable and worthwhile. For example, professional development could have more influence on faculty's promotion and tenure evaluation; or as Michael (E) suggested, deans could create the expectation and the opportunity for faculty to participate in professional development.

Faculty participants did not expect incentives or rewards for participating in faculty professional development, but that is not to say that they would not have appreciated it. As Tara (E) highlighted, however, not all extrinsic rewards are attractive to faculty. Five participants, two from the enrolled group and three from the completed group, shared the importance of financial rewards, making it the most commonly recorded incentive or reward suggested by faculty in this study.

Available Training. The institution's professional development was often most convenient to faculty because it was free, local, and customized to their policies or

technologies. However, the enrolled group participants found that the institution had not provided them access to relevant offerings.

Describing their experiences with institutional offerings, Joseph (E) and Tara (E) both indicated feelings of frustration that the professional development offerings they had attended were not relevant to their needs or position at the university. Joseph (E), in particular, explained how a lack of appropriate offerings

> is a problem at the university in general. . . .a lot of these webinars are based on helping teachers that teach courses like history, sociology, anthropology, and I think they probably do a pretty good job helping them out, but they don't help me. They're not speaking to me.

Tara (E) felt similarly regarding an assessment training that her department required she attend. She was irritated because the training was not geared toward graduate studies, which she taught. Further, because Tara (E) was a senior faculty member and has been teaching online for more than 10 years, she was not interested in introductory training. Instead, training on how to improve or upgrade her online courses would have been more relevant to her ability level. Tara (E) did not think that the institution offered training on this topic at her level. Michael (E) also noted that he did not see offerings geared towards his level.

Participation in professional development offerings not relevant to the faculty's job responsibilities made attending them feel like a waste of time, so much so that Joseph (E) stopped seeking out opportunities provided by the institution. Participants in the completed group did not discuss a lack of relevant offerings as a barrier for them. Only participants in the enrolled group had this concern.

Theme 2: Training & Facilitation. The theme of training and facilitation is the largest and most complex of the super-ordinate themes with five relevant codes. Training and facilitation was not included in Caffarella and Zinn's (1999) conceptual framework, but the number of codes related to this theme highlights its importance. Participant excerpts grouped under the theme training and facilitation were all recorded from the perspective of the training. The codes developed for this theme reveal the vast range of issues accompanying the development and facilitation of faculty professional development in higher education. Professional development offerings have many moving parts that can affect faculty satisfaction. Further, faculty needs and preferences vary, making it challenging to design one training that addresses multiple needs and preferences.

Faculty in the enrolled group were more likely to share negative online professional development experiences than the completed group faculty. Further, the completed group seemed to have a more positive experience with the university-sponsored accessibility and UDL training than the enrolled group. Many experiences were captured, revealing that faculty in the enrolled group found the training overwhelming, while faculty in the completed group found it exceptionally organized. The faculty members' professional development experience also appeared to correlate with how much they got out of the training. For example, the completed group gained more than the accessibility and UDL training outcomes advertised.

Training Mode. The participants described various professional development experiences, including a traditional face-to-face workshop and learning community, a synchronous online workshop, an asynchronous online short course, and just-in-time

assistance through online consultations and resources. The variety of training modes offered both positive and negative experiences for participants. Two additional factors, location and interaction, emerged as being inextricably tied to the training mode and, therefore, are discussed alongside the training mode.

Sora (E), Tara (E), and Ruby (C) each presented a logistical decision matrix that influenced which training mode they might participate in. As Ruby (C) mentioned, her campus was a rather sizable walking campus, so multiple factors impacted attendance at a face-to-face event, including the proximity of the training location to her office, if parking was available, and her availability for the time it would take to travel and attend. Sora (E) agreed that the building proximity and parking availability were two major factors, as was the weather because she often rode her bike to campus.

Although Tara (E) and Ruby (C) both admitted that online training offered some level of convenience, they both preferred networking with peers in a face-to-face setting. Tara's (E) decision matrix included networking and funding. In situations where she may not be networking, and it would cost money and time related to travel, she would have chosen an online option. However, if the training was relatively close or inexpensive and included the opportunity to interact with peers, she would prefer face-to-face modality.

Ultimately, the interactions in an online environment were not equivalent to an in-person event. Participants from both groups, Tara (E), Michael (E), Ruby (C), and Daniel (C), shared insight on this limitation. Ruby (C) declared that networking online is just not the same. Daniel (C) and Tara (E) both noted missing the informal interactions during coffee breaks or meals at face-to-face events when training was online. Daniel's (C) comment regarding interaction in online training illustrated their experiences: "while

you have the potential for sharing a broader number of ideas, you probably really don't" due to lower levels of interaction between participants. However, Daniel (C) also challenged this notion by adding that a unique benefit of online training was the chat feature, which often became an area for rich and immediate feedback that created a much more exciting and engaging environment.

Generally, participants found online development opportunities to be convenient but also impersonal and distracting. Rey (C) and Tara (E) found it challenging to focus in online environments due to the lack of social control and context. Daniel (C) shared that synchronous online training are still somewhat restrictive due to the schedule. Ruby (C) agreed that synchronous training was more difficult to fit into her schedule due to working around meetings, class schedules, and office hours. When asked what kept her from participating in more synchronous online training, Tara (E) explained it's a "waste of time [because] you have to sit through so much stuff that you already know to get that little bit that you didn't know. . . .it isn't tailored and…you can't tailor it."

While the asynchronous mode of the accessibility and UDL training offered more flexibility for some, others found it overwhelming and not useful for their needs. Rey (C) enjoyed the flexibility of the course because it enabled him to balance the training with his other responsibilities. However, Michael (E) and Sora (E) commented that the training content would have been more efficient in a different format. Sora (E) would have preferred a handout or a detailed website; Michael (E) would have liked a more customizable training option.

Participant experiences revealed that the decision on training mode was more complex than preference or location alone. Instead, multiple factors may have influenced a faculty member's decision.

Training Design. Training design related explicitly to the methods used to display or present the training content to participants, influenced by the training mode. Participants shared their experience with training designed using voice-over-PowerPoint, a course package in an LMS, and live presentation tools (e.g., PowerPoint).

Michael (E) and Rey (C) shared their experience in training that used voice-over-PowerPoint as the main method of content delivery. Michael (E) stated that the training was so poor that the only reason he completed it was because it was mandated by the university. Rey (C) shared his experience with the same training, calling the training "cheesy."

Tara (E) noted the design of the university-sponsored accessibility and UDL training as a major barrier for not completing the training. She recalled feeling like the assignment required to complete the training and the assignment submission process were a hassle. Secondly, she disliked how the course had been developed in a separate LMS because she then had to "somehow take what you were doing [in your course] and submit through that system." Matthew (C) and Ruby (C) also shared that the accessibility and UDL training's length and effort were unusual for professional development offerings. Ruby (C) recalled having to put in extra time and effort for the training as if she were enrolled in a university course.

Despite the concerns noted by members of the enrolled group, all of the completed participants related a positive experience with the accessibility and UDL

training course design, especially the course's layout. Matthew (C) remarked on the usefulness of the presentation of the content, which allowed him to read ahead. Rey (C) and Daniel (C) both discussed the organization and structure of the course. Daniel (C) specifically stated that the organization contributed to his completion because he would have quit the course had it been difficult to navigate. Ruby (C) also thought the course was straightforward, and the course structure "illustrated the information they were sharing" in the sense that the course itself was an example of the principles being covered.

The completed group had more positive comments regarding the design of the university-sponsored accessibility and UDL training. In Tara's (E) case, the training design essentially kept her from completing the course. Michael (E) and Rey (C) recounted their negative experience with the voice-over-PowerPoint design.

Training Content. Participants discussed the content of a few different trainings, including a synchronous online grant workshop, the university-sponsored accessibility and UDL training, and a synchronous online workshop about building an online course in the LMS. Again, the enrolled participants shared more negative experiences related explicitly to the university-sponsored accessibility and UDL training than the completed group.

Sora (E) was happy to attend a workshop about building an online course in the LMS because she viewed it as "relevant to what I was doing and. . . .something I needed to know how to do better." However, she found the accessibility and UDL training to be a waste of time because the content did not apply to her because she already knew it. Tara (E) was frustrated after attending an online grant workshop because she was

required to sit through hours of content that was not directly relevant to her or her field. When discussing the university-sponsored accessibility and UDL training, Michael (E) and Tara (E) were already familiar with accessibility from their background and serving on a university technology committee. Therefore, their negative experience was related to revisiting large amounts of content they felt they already understood. Additionally, Michael (E) thought that he did not need to know all of the "intricate details" because administrators only need a "high-level overview of what needs to be done so they can assess whether faculty are doing the right things or not." In contrast, Joseph (E) found the content in the accessibility course to be helpful, noting, "it gave me what I need to do to make my courses accessible and to be, you know, in legal confirmation with the university and federal government."

The completed group found the accessibility and UDL training content to be worthwhile and informative. Matthew (C) described the information as "thought-provoking, insightful." Ruby (C) and Rey (C) both remarked that the content provided clear examples and expectations for remediating their content into an accessible format. Ruby (C) highlighted the use of video resources and examples that were particularly beneficial to her learning. Rey (C) was impressed that he was able to apply specific tools to remediate his course materials.

The enrolled group participants were less likely to feel like the content in the online accessibility training was relevant to their needs and responsibilities. In contrast, the completed group found the information helpful and applicable.

Training Facilitation. In describing their professional development experiences over the last two years, Joseph (E), Tara (E), Matthew (C), and Rey (C) spoke explicitly about how facilitators or training facilitation impacted the overall experience.

Joseph (E) and Matthew (C) shared similar experiences, where training facilitators did not meet their specific needs. Both had negative experiences during online synchronous training. In Matthew's (C) experience, the facilitator could not understand Matthew's (C) questions, and therefore, could not offer appropriate support. Joseph (E) shared how in his experience, "oftentimes presenters assume a level of competency or understanding. . . .and they go too fast, and you know I'm not able to follow." Similarly, Matthew (C) described one-on-one consultations from a university support unit, which were unable to address his needs as they could not explain concepts with which he had no prior experience.

The training facilitator's expertise was a vital factor in helping Tara (E) determine if she would register for training or not. She desired "presenters who really are experts and do have the kind of knowledge that will be useful to me." Tara (E) shared several examples of negative experiences with facilitators, including facilitators who were not comfortable in front of the camera and a facilitator who repeatedly used icebreakers in a virtual environment, which Tara (E) mentioned were annoying and impractical.

Lastly, Rey (C) shared how the facilitation of the asynchronous university-sponsored accessibility and UDL training was a significant factor in his ability to complete the training. Although the training was asynchronous, the faculty had four weeks to complete the course, and a facilitator was present to answer questions and guide

faculty along. As Rey (C) described, the training included "a very clear schedule for due dates and different tasks. . . That's something that's always been important for me."

Three faculty participants, Tara (E), Matthew (E), and Rey (C), shared how poor facilitation affected their experience of faculty professional development. Rey (C) also highlighted the facilitation of the university-sponsored accessibility and UDL training as a key driver in his completing the training. The other four participants in this study did not discuss training facilitation as having a positive or negative impact on their faculty development experiences.

Training Outcomes. Each participant was asked about the influence of the accessibility and UDL training on their primary role at the institution. Of all of the participants, Sora (E) was the only participant who did not feel that the university-sponsored training positively affected her position at the institution. The remaining enrolled participants said that the training affected their role by enabling them to make their courses accessible (Joseph, E; Tara, E), making them more aware of the issues present (Tara, E), and providing the information necessary to assist other faculty in meeting accessibility standards (Michael, E).

Participants in the completed group reported similar outcomes and tended to take away additional and unexpected benefits from the course. Matthew (C), Ruby (C), and Rey (C) each mentioned that they acquired course design principles based on the course organization. Matthew (C) thought the course made him more effective and opened his mind to new ideas:

> I think it made me more effective. I mean, sometimes you think you have a good idea about the best way to do something. And so that's the way you do it, right?

> But when you consider other perspectives and other approaches that opens your mind to other methods, other techniques that might be more effective and worthy of adopting.

Rey (C) and Ruby (C) each mentioned how their understanding and application of accessibility has expanded beyond their teaching to their service responsibilities. Daniel (C) stated, "I know there were some things I was looking forward to get [*sic*] out of [the university-sponsored accessibility and UDL training], which I absolutely got, and then there were some other things that it made me think about that I hadn't anticipated." Daniel (C) used the unexpected benefits as a springboard to consider other methods of addressing diversity and inclusion within his courses.

Seven of eight participants, 88%, remarked that the university-sponsored accessibility and UDL training had an effect on their primary role at the institution. The training had an effect on participants from both groups, but participants in the completed group seemed to achieve additional benefits beyond the training outcomes.

Theme 3: Professional Considerations & Commitments. Professional considerations and commitments are also not included in Caffarella and Zinn's (1999) conceptual framework, but it was necessary to include four relevant codes discovered through the data analysis. The super-ordinate theme draws attention to the responsibilities and expectations associated with being hired as a faculty member in higher education. In addition to the faculty's already heavy workload, which typically revolved around teaching, research, and service, there were specific times and situations that caused an increased workload. Overall, the number of professional responsibilities negatively affected participation in faculty development. As Sora (E) remarked, "the

more work you have to do, the less time you have to spend on extras like this [university-sponsored accessibility and UDL training]." When faculty do have time to participate in professional development, they need development directly relevant to their job responsibilities and current activities.

Workload. The participants in the study showcased a variety of professional positions that are present in higher education. The participants' main workload centered on the three pillars of teaching, research, and service. Sora (E), Matthew (C), and Ruby (C) all split their time between teaching and service. Joseph (E), Tara (E), and Michael (E) are tenured professors, and Daniel (C) and Rey (C) are tenure-track professors. Daniel's (C) appointment is only divided between research and teaching, whereas Rey's (C) appointment includes teaching, research, and service. Daniel (C), Ruby (C), and Michael (C) also serve in additional roles at the institution.

For three participants, Sora (E), Matthew (C), and Daniel (C), who all teach high enrollment courses, teaching was the most important of their professional responsibilities. Mathew (C) and Sora (E) mentioned a high workload due to large classes. Sora (E) also noted that because she taught writing, the grading load for these courses was very labor-intensive. Sora (E) acknowledged that she had noticed a general increase in work responsibilities over the last 20 years: "as my responsibilities increase and my compensation at least doesn't it just makes me burned out. It can make me feel very resentful…and it's also something that's made me…seek other kinds of outside work." Even Ruby (C), Rey (C), and Joseph (E) reported that teaching was their most important responsibility, despite the differences in their professional responsibilities.

In discussing workload, participants also mentioned the balance among their professional responsibilities. When asked to describe his primary role at the institution, Rey (C) admitted that

> in practice, it's more 75% emphasis on research, and then 25% is kind of divided among teaching and service. . . .I'm still trying to find the balance between the two to be honest, and so that I'm trying to devote as much time as I can to all three equally.

Therefore, "it can be difficult to fit in other kinds of activities that aren't required." Tara (E) expressed a similar outlook on the workload balance of tenure-track faculty: "the university says it's 40% teaching, 40% research, 20% service, but when you go up for promotion and tenure, it's 90% research."

Tara (E) was the only participant to record research as her most prominent and important responsibility. Tara (E) estimated that she worked between 60 and 80 hours a week. Within that, there was not enough time to participate in faculty development on top of the research, teaching, and service that she was expected to complete, with most of her time dedicated to research. Similarly, Michael (E) shared that his administrative responsibilities hurt his ability to participate in faculty development because of the time commitment of his job responsibilities and the fact that "it's not like my other duties go away when I'm doing [professional development]."

Faculty experienced heavy workloads associated with their appointments in the areas of teaching, research, and service. Three faculty, 38%, also found it difficult to balance their workload responsibilities. Therefore, finding time to schedule additional activities, even those helpful or relevant to their job responsibilities, was challenging.

Increased Work Responsibilities. In addition to their already heavy workload, the participants discussed specific times where an increase in work-related duties made it even more challenging to participate in or complete faculty development. Two participants shared that December, which fused the end of the fall semester, graduation, and other unique job responsibilities, was a time of increased work responsibilities. A second example of increased work responsibilities shared between two participants was the shift to remote learning in the spring 2020 semester due to the COVID-19 pandemic. Tara (E) and Joseph (E) also briefly noted the increased work responsibilities associated with the institutional mandate for accessible courses.

Michael (E) and Ruby (C) agreed that December was a busy time of the academic year. The end of the semester brought about additional grading, record keeping, filing, and reporting. Michael (E) explained that during this time, his college also prepared reports for publication in national magazines. Ruby (C) mentioned that she held more meetings with students at the end of a semester because there was typically an increase in student issues or grade questions. Ruby (C) also served on thesis committees that often met at the end of a semester. As an instructor in the Honors College, Ruby (C) attended an additional number of ceremonies, in addition to the regular college graduation ceremonies. Both participants noted that when they registered for the university-sponsored accessibility and UDL training, they chose the asynchronous online version because it fit better into their schedule during this time of increased work responsibilities.

Sora (E) and Matthew (C) both commented on the additional planning and effort to shift their courses to an online environment during the COVID-19 pandemic. Matthew (C) became overwhelmed with this unanticipated increase in work responsibilities and

had to drop out of a professional development offering in which he was participating. Sora (E) expounded on the sheer amount of work, planning, and effort that she had to put into her teaching due to the shift to online learning.

Six of the faculty participants, 75%, shared information regarding an increase in their work responsibilities during the interviews. Increases in work responsibilities were both expected and unexpected.

Relevance and Interest. Participants discussed the need for professional development that was directly related to their current job needs or responsibilities and interests. The faculty's interest in a professional development topic appeared as a strong motivator for three participants in the enrolled group.

When asked about the factors influencing their participation in faculty development, Joseph (E), Michael (E), and Sora (E) stated interest in the topic as their first answer. Sora (E) concluded that she participated in professional development mostly because she liked doing it. Sora (E) defined interest as opportunities that she was able to take ownership of and were enjoyable to her. Michael (E) recounted his experience in a year-long professional development opportunity that required him to complete his typical professional responsibilities on evenings and weekends. Still, he did it because he was interested in the training.

One hundred percent of the participants stated that a major reason for participating in faculty development was the need for information related to their job responsibilities, especially teaching. As Joseph (E) and Daniel (C) explained, their interests were often related to a specific issue or concern within their teaching, research, or service. However, Joseph (E) admitted that a primary barrier to his professional

development participation was a lack of offerings that were of interest to him. As he explained, "the things that I want to do, they don't talk about…[and] the things that they want to teach me, I'm not that interested in. . . .it's just annoying." Michael (E), Matthew (C), and Rey (C) recognized that they probably would not have participated in specific faculty development offerings had they not been directly related to their job responsibilities at the time. As Matthew (C) mentioned, "if I wasn't teaching, I wouldn't participate in the [university-sponsored accessibility and UDL training]…because it wouldn't be of any value to me." Michael (E) also stressed that faculty development should focus on what people need for their jobs. Other participants mentioned participating in faculty development based on an issue or concern in their teaching (Daniel, C; Ruby, C), a knowledge gap (Sora, E), or learning new skills to apply to their teaching (Joseph, E; Matthew, C; Rey, C).

Ruby (C) participated in a learning community near the shift to remote learning due to COVID-19 and found the opportunity to share ideas and brainstorm solutions with other faculty to be the most valuable part of this community. Sora (E), Joseph (E), and Matthew (C) also recounted their experiences in attending professional development related directly to the shift to online learning in spring 2020. Sora (E) hoped to find ways to do a better job with her course, and both Joseph (E) and Matthew (C) saw a need to learn more about how to teach in a virtual environment.

Ruby (C), Sora (E), Joseph (E), and Matthew's (C) experiences highlighted the benefit of having programming that feels highly relevant and interesting to faculty. The ability to discuss and seek training on specific and timely issues was beneficial for these faculty.

Credibility. Participation in faculty professional development was one way participants mentioned that they could gain credibility on three different levels. Credibility with students, credibility with colleagues, and credibility with supervisors were highlighted by four participants, two from each group, as reasons to participate in faculty professional development. For example, Ruby (C) used professional development to maintain her public relations professional accreditation, therefore gaining credibility among her colleagues and students. Rey (C) also sought professional development to maintain his credibility with his students, feeling like he must stay relevant and improve his skill.

Sora (E) also participated in faculty development as a way to gain credibility with her students and her supervisors. Specifically, Sora (E) shared that she felt obligated to be a practicing writer to share those experiences with her students and, thereby, be seen as credible by them. Sora (E) also felt very strongly about proving her competence to her supervisors. In an attempt to be seen and recognized for her efforts, Sora (E) shared that she added every activity to her annual report because "I'm not going to let them ignore me." Michael (E), who was an associate dean, participated in faculty development to gain credibility with his colleagues. His perspective was that

> I kind of feel the need to stay up with what faculty are having to do so that when I face those questions from faculty about why we need to do this, well, here's why we need to do it and I've been through it myself as well so. I think that adds a lot of credibility and faculty don't think you're just the high person telling me to do things.

Faculty experienced scenarios where they felt it necessary or beneficial to share their expertise with stakeholders at their institution. Rey (C) and Sora (E) both use faculty development as a method for gaining credibility with their students. Sora (E), Michael (E), and Ruby (C) use faculty development as a method for gaining credibility with their colleagues.

Theme 4: Personal Considerations & Commitments. The theme of personal considerations and commitments was included in Caffarella and Zinn's (1999) conceptual framework and defined by Zinn (1997) to show that "personal issues play pivotal roles" in professionals' lives (p. 20). The codes associated with this theme were relevant to the participant's personal identity, preferences, and commitments separate from their life as a professional. Participant excerpts grouped under the theme of personal considerations and commitments were all recorded from the faculty's personal life perspective.

Although there are only two relevant codes, the responses related to personal considerations and commitments revealed that these significantly affected faculty, especially their participation in faculty professional development. Faculty could not always separate their personal from their professional lives. In some cases, faculty faced traumatic events that directly impaired their ability to perform their professional duties.

Increased Home Responsibilities. In addition to Michael (E) and Ruby (C) discussing their increased work responsibilities, specifically around December, both also mentioned an increase in home responsibilities when they were enrolled in the university-sponsored accessibility and UDL training.

As a mother of two sons, Ruby (C) noted that the last few weeks of December brought about increased home responsibilities due to the holiday season and her children

being home from school. Further, Ruby (C) mentioned that "both of my kids are on the autism spectrum, so transition and change tends to be a stressful time at our house." Michael's (E) increased home responsibilities also had to do with his son while he was enrolled in the accessibility and UDL training. Michael (E) explained how any extra time that he would have normally had during that period was "consumed up with my personal responsibilities that were going on at the time," which were specific to caring for his son, who had been in an accident in October.

Though centralized to two of the study's participants, the increase in home responsibilities can significantly affect faculty's ability to take on additional projects, as demonstrated by Ruby (C) and Michael (E).

Major Life Event. Four participants, three from the enrolled group and one from the completed group, shared the impact of a major life event on their personal and professional lives. When discussing factors that impeded them from completing the university-sponsored accessibility and UDL training, Michael (E) and Sora (E) shared traumatic personal events during their time enrolled in the course. While enrolled in the training, Michael's (E) son was in an accident that required numerous hospital stays and surgeries. Sora's (E) home flooded during her participation in the accessibility training, forcing her to relocate and complete repairs for almost a year. Both participants recognized that these events made their life, in general, more complicated, causing a shift in priorities.

Although none of the participants mentioned the COVID-19 pandemic directly affecting their physical health, the stress of a global pandemic and the effort to shift their work to an online environment significantly impacted some participants' mental health.

Matthew (C) shared that he was "overwhelmed by the amount of time required to put the face-to-face [course] online" because of the pandemic, forcing him to withdraw from a professional development offering in which he was participating. Sora (E) and Tara (E) also remarked on the impacts that the COVID-19 pandemic had on them. Tara (E) stated that her "brain has shut down" and Sora (E) "was really depressed after the [pandemic] lockdown," and remembers feeling "tired in a way that we'd never been tired before."

Sora (E), Tara (E), Matthew (C), and Michael (E) shared how a major life event diminished their ability to participate and complete professional development training. Participants who were enrolled in any type of professional development training at the time of a major event were less likely to complete the training.

Theme 5: Frames of Reference. The final category in Caffarella and Zinn's (1999) conceptual framework is titled intellectual and psycho-social characteristics and represented the characteristics that influenced individuals' willingness to engage in professional development. Frames of reference related to Mezirow's (1997) theory on transformational learning, which defined frames as an adult's thoughts, behaviors, and emotions from their habits of mind and points of view. Although the underlying meaning of the two different titles, intellectual and psycho-social characteristics and frames of reference, were similar, Mezirow's title was ultimately more appropriate. The decision to use Mezirow's (1997) title resulted from the desire to highlight the theme's relevance to adult learning theories, and the five codes used to develop this theme centered on the participant's values, beliefs, and attitudes.

Frames of reference provided essential context to the behaviors in which humans engaged. Learning preferences are included under the theme of frames of reference as

Mezirow (1997) considered learning preference an epistemic belief present in adults. Study participants often participated in informal professional development more regularly and found it met their needs better than formal development. Further, participants shared several positive beliefs and attitudes related to the impact of professional development on their own and others' lives.

Learning Preferences. Informal methods of professional development were revealed to be the overwhelming preference of the participants. Each participant was asked to describe the types of professional development they had participated in during the past two years. Six of the eight participants, 75%, described more informal types of professional development than formal offerings. Only Daniel (C) and Ruby (C) participated in more formal professional development than informal. Examples of informal development gathered from the participants included chatting with colleagues on social media; talking with colleagues in their office building or over a meal; informal networking with peers at events or conferences; reading professional articles, books, or magazines; trial and error; and self-reflection. Joseph (E) specifically spoke out against formal professional development as he could not follow the presentation order and absorb the information. As a kinesthetic learner, Joseph (E) has found much more success through trial and error, or as he phrases it, “figuring it out myself,” and asking colleagues for assistance when needed.

The benefit of informal development, as Tara (E) explained, was that it was timely and relevant. When she needed to know more information about a topic, Tara’s (E) first inclination was to search for the information herself because she generally knew what she was looking for and felt confident in locating the information. Depending on

the time she had available and the complexity of the issue, she may have also reached out to a colleague because "they're doing pretty much the same stuff I'm doing." Ruby (C) agreed that attending formal offerings and consultations was often not realistic because "I didn't have time to go and find the training. . . .like this wasn't working this week; I needed to fix it by next week."

Participants shared more examples and more positive experiences regarding informal professional development than formal professional development. Faculty were also more likely to begin their development in an informal manner, by asking colleagues or searching the internet.

Belief in Continued Development. The most prevalent code related to frames of reference was the participants' belief in their continuous development. Seven participants, 88%, discussed a desire to continually improve their professional skills as a main factor in participating in faculty development. Intrinsic motivation to be good at their jobs, learn new skills, and adequately teach their students are some of the drivers described by participants. Rey (C) described his motivation as a "general sense of just trying, wanting to do better, wanting to be better, wanting to improve what I'm doing and making sure that I'm being as effective as I can in my job." Matthew (C) and Daniel (C) shared the same attitude as Rey (C), remarking that they always aim to do a better job.

Ruby (C) felt incredibly motivated and obligated to engage in professional development related to teaching because she did not identify as an academic. Spending much of her career as a practicing public relations professional, she was "always working on [being a better teacher and instructor]. And the way I do that is like at least once a semester, find something that will help me in my classroom, in my teaching." Similarly,

Daniel (C) shared the belief that he could always do a better job, and therefore, he was always searching for new things to learn and ways to be more efficient in his processes.

Seven participants shared a belief in continuous development. Both groups of participants showed a relatively even level of underlying beliefs related to the importance of their continuing education. Only Michael (E) did not share any experiences that reflected a desire to continue his professional development.

Perception that Faculty can make a Difference in the Lives of Students. When asked which of their responsibilities was most important to them, six participants, two from the enrolled group and four from the completed group, answered teaching. Michael (E), an associate dean, also chose responsibilities that were student-facing as his most important responsibility. Tara (E) was the only respondent who chose research as her most important responsibility. Participants were also asked to explain why these responsibilities were the most important to them, and faculty shared various perspectives, including enjoyment, engagement, and simply the fact that there was a certain level of obligation as it was part of their job responsibilities. Although Tara (E) chose research as her most important responsibility, she explained that research was important because it informed her teaching and other people's teaching.

Rey (C) and Sora (E) highlighted the impact that faculty can have on student lives through poignant experiences in their careers. For them, these experiences cemented the need for adequately meeting the needs of their students. Several years ago, a deaf student enrolled in Rey's (C) course and required closed captioning for a video that Rey (C) shared in class. Rey (C) was not able to rectify the student's situation before the end of the term, leaving him uncomfortable that he could not adequately provide materials for

his students. Sora (E) encountered a student with chronic neck pain that prevented her from sitting and focusing on her schoolwork. Sora (E) was able to make "things move through the right channels to get her an extend and complete." For Rey (C), the desire to avoid situations where he could not provide materials to students in an accessible format was a major motivating factor in his decision to participate in the university-sponsored accessibility and UDL training. Sora (E) shared an alternative perspective about how the training might affect students. She surmised that the institutional mandate for accessible course materials might have a negative impact on students because faculty would make fewer materials available to students due to the time and lack of support from the university for remediating course materials.

Rey (C) and Joseph (E) both briefly discussed how their professional development activities could directly impact their students. Joseph (E) declared, "I'm self-motivated to become a better teacher and, you know, to learn new skills, new techniques, to improve my teaching, and therefore the success of my students in learning." Rey (C) also explained that, even if the university culture did not understand or support this fact, he understood that quality instructors could help the university as a whole:

> you're trying to improve your teaching so that you've been engaging the students because when that works, when that's effective, the department benefits because then we're getting more majors and we're getting more students, and we're getting more students who doing [*sic*] better in our classes. And I think that kind of it [*sic*] benefits the larger department.

The faculty participants understand and value their impact on the lives of their students. Participants from both groups shared the perception that faculty can make a difference in students' lives.

Perception that Faculty can make a Difference in the Lives of other Faculty. Michael (E) and Tara (E) were the two participants who disclosed how their decision to participate in faculty development was often meant to influence other faculty members. Joseph (E) and Ruby (C) also shared several examples of how faculty worked together to solve problems during the shift to online due to the COVID-19 pandemic in spring 2020. Daniel (C) organized a development variety of opportunities for his colleagues. These examples illustrated the concept of faculty impacting their colleagues' lives by serving as model employees or sharing their expertise in a particular area.

Michael (E) and Tara (E) indicated that one of the main reasons they registered for the university-sponsored accessibility and UDL training was to serve as a model for their colleagues. As an associate dean, Michael (E) often completed professional development to maintain credibility with his colleagues (discussed in Theme 3). However, specifically for this professional development training, Michael (E) was using the knowledge and information learned to support faculty in their own remediation processes and address concerns or complaints from faculty in his college. As a senior faculty member, Tara (E) felt obligated to be a model to junior faculty members who did not wish to participate in the training. By registering for the training, Tara (E) thought she acted as a model and set a positive example.

Some of the most useful professional development that Joseph (E) and Ruby (C) participated in related to the shift to online learning in spring 2020 was an informal

discussion with other colleagues. Joseph (E) recounted multiple instances where he asked for assistance from other faculty members, but the most impressive example he gave was of an impromptu training regarding Zoom's breakout rooms feature. During a formal professional development training, a peer in the session offered to meet with attendees to illustrate Zoom's breakout rooms feature, a topic not discussed during the training. Joseph (E) asserted that this was the most useful development training he had received. Ruby (C) also found the casual conversations with colleagues in a learning community very influential in her teaching approach.

Daniel (C) provided another example of how faculty influenced one another. As head of a professional development organization on campus, Daniel (C) organized and presented formal and informal professional development offerings for new and veteran faculty members in his college and throughout the institution. As a fellow faculty member, Daniel (C) was able to provide unique insight and perspective to his colleagues attending the training.

The faculty participants also understand the impact they can have on the lives of their colleagues. Five participants shared examples of how other faculty members' participation in professional development has impacted them or how they have been able to impact their colleagues through professional development at their institution.

Response to the Research Questions

The sections below respond to each of the research questions using data gathered from participants in this study.

Primary Research Question. The study's primary research question was "What factors affect higher education instructional faculty members' participation in online

professional development training?" Data from the four participants in the enrolled group and the four participants in the completed group were used to answer this question.

The study highlighted several different factors that affected a faculty member's participation in online professional development. Faculty showed the strength the institution (Theme 1) had on influencing their participation in online faculty development. Although the institution's culture did not generally provide incentives or rewards for participating in faculty professional development, six participants, 75%, mentioned institutional mandates as a main factor for participating in training. Five faculty, 63%, noted that the presentation of extrinsic rewards, precisely financial rewards, would increase their participation in faculty development. Two faculty, one from each group, indicated that the certificate offered for completing the university-sponsored accessibility and UDL training (i.e., a certificate) was not an adequate motivator for them.

Frequently, professional and personal responsibilities (Themes 3 and 4) were barriers to faculty participation in online faculty development. While most agreed that online development was more convenient and easier to schedule, faculty workload along with an increase in personal and professional responsibilities at certain times made it difficult for faculty to participate. Sometimes, as in Sora (E) and Michael's (E) major life events, these responsibilities were unexpected and unavoidable. However, perceptions that faculty can make a difference in the lives of students and other faculty (Theme 5) appeared to be a strong motivator for faculty to participate in faculty development.

Formal professional development offerings were not the learning preference for 88% of the participants (Theme 5). Further, although online offerings offered a certain

level of convenience, participants found them impersonal, distracting, and of poor quality (Theme 2). However, faculty spoke to the need to have training related to the professional responsibilities they were expected to perform. All eight faculty participants, 100%, shared increased motivation to participate in training that they perceived as directly relevant to their job duties (Themes 1 and 3). Training relevant to the participants' job responsibilities and interests was identified as an institutional deficiency by three participants, 38%. Faculty who no longer felt that the institution was serving their needs by providing appropriate training, for example, Michael (E) and Joseph (E), refrained from attending professional development opportunities.

Faculty participants expressed that a desire to improve their professional responsibilities continually (Theme 5) was a main factor in participating in faculty development. Seven of the eight faculty, 88%, described how their belief in continued development impacted their faculty professional development attendance. Further, four participants, 50%, shared how they used faculty development to increase their credibility with their students and colleagues (Theme 3).

Sub-Question A. The first sub-question of the study was "What factors support higher education instructional faculty members to complete a university-sponsored online professional development training on accessibility and universal design for learning?" Only data from participants in the completed group were used to answer this question. Members of the completed group registered for the university-sponsored accessibility and UDL training, enrolled in the LMS course, and achieved at least 40/50 points, or 80%, on the capstone assignment when graded using a rubric.

The institutional mandate (Theme 1) was a key driver for faculty completing the university-sponsored accessibility and UDL training. Throughout the interviews, Rey (C), Daniel (C), and Ruby (C) mentioned the institutional mandate and legal repercussions underpinning the mandate. Although the mandate may have been the initial impetus for registering for the training, faculty in the completed group were also more likely to realize how providing accessible resources would help their students (Theme 5). All of the participants in the completed group referenced the impact that the training had on their teaching and their students.

The training and facilitation (Theme 2) appeared to be the most significant factor in supporting faculty members in completing the training. Faculty were able to register for the time and modality that was most convenient and useful to them. Faculty initially registered for the training because it was relevant to their job responsibilities, especially teaching. Throughout the course, faculty found that the course design and course content supported their learning journey and enabled them to complete the course. The course design was easy to navigate, organized, and well-facilitated. In addition, the course content was directly relevant and easily applicable to their job responsibilities (Theme 3) so that faculty felt able to apply the information they learned in their courses immediately. Further, faculty in the completed group recorded fewer personal (Theme 3) and professional (Theme 4) barriers than their enrolled group counterparts.

Sub-Question B. The second sub-question of the study was "What factors impede higher education instructional faculty members from completing a university-sponsored online professional development training on accessibility and universal design for learning?" Only data from participants in the enrolled group were used to answer this

question. Members of the enrolled group consisted of faculty who registered for the university-sponsored accessibility and UDL training, enrolled in the LMS course but did not complete the training.

In contrast to their counterparts, the enrolled group found the design and content of the university-sponsored accessibility and UDL training to be barriers to completion (Theme 2). Michael (E) and Tara (E) found the course design to be overwhelming and including irrelevant information. Joseph (E) did not find the training modality conducive to his needs. Along with an already high workload, Sora (E) did not perceive the training as relevant to her job responsibilities (Theme 3). Although Tara (E) completed the course content, she chose not to submit the final assignment because the time and effort required to submit the assignment were not worth the certificate's reward (Theme 1).

Professional (Theme 3) and personal responsibilities (Theme 4) were principal contributing factors in Joseph (E), Michael (E), and Sora's (E) inability to complete the training. Joseph (E) felt extremely overwhelmed at the task of remediating his course materials and frustrated at the increase in his workload in the time allotted by the institutional mandate. Michael (E) and Sora (E) endured major life events during the time that they were registered for the training. Michael (E) specifically noted that the increase in his personal responsibilities due to his son’s accident was a major factor in his inability to complete the course. During this time, Michael (E) felt as if he was suddenly being pulled in different personal and professional directions, which meant that there was less time to focus on activities that might be seen as extraneous.

Summary

The purpose of this chapter was to detail the findings of the phenomenological case study. Using Smith et al. (2009) IPA method of data analysis, eight semi-structured interviews, field notes, and a research journal were analyzed to answer the present study's research questions. A summary of the data collection and analysis processes were restated to provide context to the findings. Profiles for each participant were presented. From the initial notes and emergent themes, five super-ordinate themes and their relevant codes were organized and shared to understand the experience of faculty participation in online faculty development. The chapter closed with a discussion of how the data findings answered the research questions. The implications of these findings are discussed in the next chapter.

CHAPTER V

Conclusion, Interpretations, and Recommendations

A phenomenological case study was conducted to discover the complex structures that influence instructional faculty members' participation in online professional development. In this chapter, the theoretical framework underpinning the conclusions is summarized. Each super-ordinate theme is then discussed according to the findings in Chapter IV and related literature. Implications for practice and recommendations for future research are also included.

Faculty development is only one intricate component of the educational, institutional, and departmental systems in which faculty participate in higher education (Henderson et al., 2015). Higher education institutions are complex, open systems making it difficult to comprehend, view, and evaluate systemic or partial change (Adham et al., 2015; Borrego & Henderson, 2014). Previous research has not comprehensively explained how personal and environmental supports work together to provide valuable continuing education and how similar constraints inhibit instructional faculty's participation in faculty development (Austin, 2011; Caffarella & Zinn, 1999; Manduca, 2017). Therefore, the use of systems theory to interpret the current research findings provides more insight into the systematic relationship between personal, professional, and organizational factors and faculty professional development (Meyer, 2014). The present phenomenological case study aids in providing a deeper understanding of the online faculty development experience. The use of systems thinking enables the findings to be discussed within the context of a system of higher education.

A system is a group of interrelated elements (Bertalanffy, 1950, 1968; Bess & Dee, 2008; Laszlo & Krippner, 1998), and system science accentuates the relationships between the interacting parts, seeking to understand the components' interrelationships (Banathy, 1992; Senge, 1990). There are many tools, techniques, and theories used by systems thinkers. Double-loop learning is an example of a systems tool that teaches people to evaluate their assumptions and beliefs (Argyris, 2002). Theory U is a more recent systems method that integrates thought, emotion, and will to stimulate new solutions to current problems (Scharmer, 2018). The iceberg model provides a method of analyzing events to uncover the paradigms and structures that drive human behaviors and patterns (Kim, 1999; Monat & Gannon, 2015). Double-loop learning and Theory U were to methods considered to interpret the findings of the present study, but are best applied as a procedural method within a research design. Instead, the iceberg model can be used as an observational tool or to interpret previously collected data.

The iceberg model, typically depicted as a hierarchical triangle, is a general method of systems thinking, which has been customized for various systems, including national cultures (Garrison, 2006), learning organizations (Senge, 1990), organizational culture and leadership (Schein, 2004), and project management culture (Rees, 2008). A typical depiction of the iceberg model includes three layers for events, patterns, and systemic structures (see Figure 2; Karash, n.d.; Kim, 1999; Rees, 2008). Another common depiction is the four-layer model, which separates mental models into its own tier at the bottom of the triangle (Monat & Gannon, 2015). Due to the scope of the present study, the three-layer iceberg model was used to interpret each super-ordinate theme (see definition of terms for each layer's definition). This study's conclusions are

based on the interpretation of participants' experiences through the iceberg model and are supported by relevant literature.

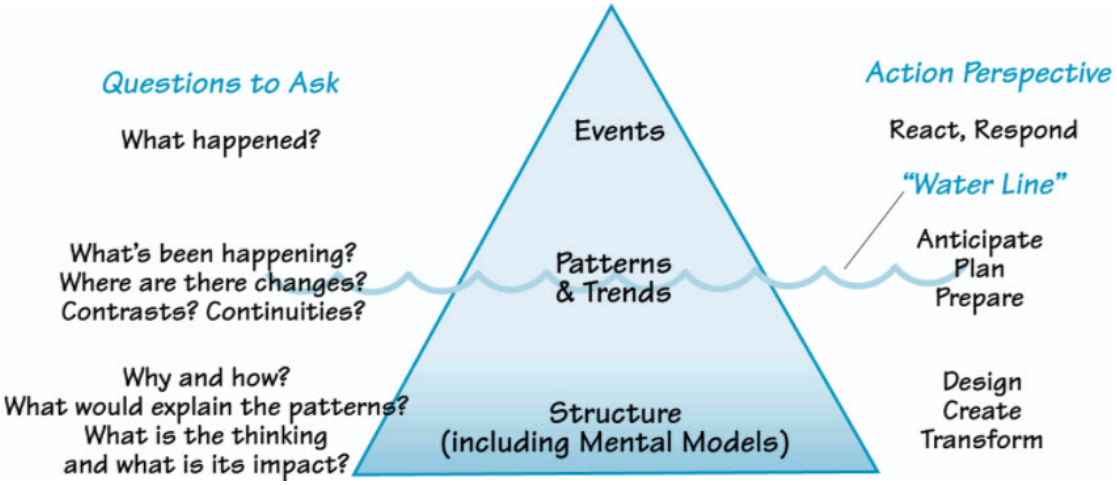

Figure 2. The three-layer iceberg model. Adapted from "How to see structure" by R. Karash, (n.d.). Retrieved from https://thesystemsthinker.com/how-to-see-structure/. CC BY SA-4.0.

Discussion and Relationship to Literature

The research findings are discussed through the lens of the iceberg model. The three main events (i.e., the top of the iceberg) that occurred in relation to this study and were used to draw conclusions are:

- All faculty participants registered for a university-sponsored online asynchronous self-paced, facilitator led training on accessibility and UDL. Faculty had four weeks to complete the training.
- The faculty participants in the completed group completed a university-sponsored online professional development training on accessibility and UDL.

- The faculty participants in the enrolled group did not complete a university-sponsored online professional development training on accessibility and UDL.

Data corresponding with each event was then interpreted to discover patterns and trends that may have influenced the events over time. Conclusions developed from the event and pattern levels are organized by super-ordinate theme and discussed below.

Theme 1: Institutional Structures. This case study supports previous findings that institutional structures can have an impact on faculty's participation and completion of online professional development (Dailey-Hebert et al., 2014; Efu, 2020; Sabagh & Saroyan, 2014; Sener & Hawkins, 2007; Steinert et al., 2009). The institutional structures that most significantly influenced the participants' participation and completion status in the university-sponsored accessibility and UDL training were the institutional mandate and a perceived lack of support from the university.

The university-sponsored accessibility and UDL training was voluntary from the university perspective. The institutional mandate on accessibility required that course materials meet web content accessibility guidelines. However, three, 75%, enrolled group participants acknowledged that institutional mandates influenced their participation in faculty development. This finding supports other studies (Kreaden, 2002; Steinert et al., 2009) that recommend the use of mandates to increase attendance in faculty professional development. Nevertheless, the institutional mandate on accessibility was either not influential enough to impact the enrolled group's completion status or the group's barriers significantly impeded their completion. Additionally, two, 50%, completed group faculty noted that the institutional mandate on accessibility significantly

influenced their completion status. For example, Ruby (C) perceived that the university-sponsored accessibility and UDL training was part of the institutional mandate and stated this was a primary reason for completing the training. Institutions should consider the relationship between an institutional mandate and increased professional responsibilities when using mandates as an incentive to participation or completion.

The perceived lack of institutional support had a significant influence on the enrolled group's completion status. One hundred percent of faculty in the enrolled group shared that a lack of institutional support for remediating their course materials left them feeling overwhelmed and abandoned, affecting their ability to complete the university-sponsored accessibility and UDL training. Other researchers (Efu, 2020; Sener & Hawkins, 2007; Steinert et al., 2009) have also identified a lack of institutional support as a barrier to professional development. Conversely, an increase in organizational support has been found to positively impact motivation and learning transfer (Gegenfurtner et al., 2009; Jin & McDonald, 2017). The institutional mandate on accessibility further also increased their professional responsibilities as remediating course materials to comply with the mandate was time-consuming. Three, 75%, enrolled group faculty indicated that a heavy workload is typical of their position at the institution. The institutional mandate on accessibility further increased their professional responsibilities as remediating course materials to comply with the mandate was time-consuming. Additionally, these faculty noted a lack of institutional support to assist them in remediating their course materials. For example, Joseph (E) stated "I was upset that it actually involved a heck of a lot of work [to make your course accessible]. And I felt that, number one, we needed more time to prepare." The four enrolled faculty would have preferred assistance in

remediating their course materials to registering for training on the topic. The enrolled group faculty's perception of the lack of institutional support negatively reinforced the institutional mandate on accessibility, which led to feelings of frustration and a lack of trust towards the university.

Three patterns are evident from these findings. First, institutional mandates appear to increase registration for faculty professional development. Second, mandating training can support completion rates. However, it is not clear if completion rates increase for training that supports an institutional mandate. Third, a lack of institutional support to comply with an institutional mandate led to increased work responsibilities and decreased time to complete professional development.

Theme 2: Training & Facilitation. The present study demonstrates that the training design and facilitation could influence the participation and completion of online faculty development (Steinert et al., 2009; Steinert et al., 2010; Wang et al., 2003). The university-sponsored online and accessibility training's design and content had the most significant influence on the participants' completion status. The same elements that were barriers to completion for one group (i.e., enrolled group) supported the other group's completion (i.e., completed group) and these elements could be related to learning preferences. These findings suggest that registrants who had a positive learning experience were more likely to complete the training. Registrants who had a negative learning experience were less likely to complete the training (Sener & Hawkins, 2007).

Faculty attitudes and preferences toward the university-sponsored accessibility and UDL training design differed between the enrolled and completed groups. Attitudes related to their learning experience in the online environment stemmed from multiple

factors, including the training design, content, and facilitation. Completed group faculty were more likely to indicate a positive learning experience. All participants in the completed group associated their positive learning experience with a well-organized and easy-to-navigate LMS course. This group also thought the training content was more relevant to their job responsibilities, indicating that they may have been less familiar with the overall content and needed a more structured learning environment to learn the information. Alternatively, the completed group might have found the content more relevant because their online courses contained more material in formats that required accessibility remediation.

In contrast, the enrolled group faculty were more likely to indicate a negative learning experience due to course content that was not relevant to their job responsibilities and an overwhelming course design. This group was also more likely to share other negative experiences with online professional development, which may have negatively affected their learner attitude and buy-in. For example, Tara (E) and Michael (E), and Joseph (E) described other online trainings that they felt were also poorly designed or facilitated. Previous negative training experiences is one situational factor that has been identified as having an impact on adult's attitudes towards future training (Mathieu, Tannenbaum, & Salas, 1992).

As a result of the two group's differing experiences, similar positive and negative patterns are interpreted. For instance, positive personal attitudes towards professional development design, content, and facilitation will positively impact the learner experience, which in turn can impact completion rates. Additionally, negative personal

attitudes towards professional development design, content, and facilitation will negatively impact the learner experience and completion rates.

Theme 3: Professional Considerations & Commitments. There was not a significant variance in reported workload between the completed and enrolled groups during their participation in the university-sponsored training. Faculty from both groups performed multiple responsibilities as part of their faculty appointment, mainly teaching, research, and service. As discovered in other studies (Dailey-Hebert et al., 2014; Efu, 2020; Lowenthal et al., 2013; Sabagh & Saroyan, 2014; Sener & Hawkins, 2007; Shagrir, 2017; Steinert et al., 2009; Steinert et al., 2010; Wang et al., 2003), workload and increased professional responsibilities influenced faculty participation and completion of online professional development. Training relevance to job responsibilities and interest in training topics also had a significant influence on faculty participation and completion.

While enrolled in the university-sponsored accessibility and UDL training, participants experienced an increase in professional responsibilities. The increases in duties were both expected (e.g., Michael (E) and Ruby (C) noted a rise each December) and unexpected (e.g., Tara (E) and Joseph (E) remediating their course materials). The barrier of faculty workload and responsibilities affected both groups' participation, which makes it challenging for faculty to prioritize their workload (Austin, 2010; Cherrstrom & Alfred, 2020; Hott & Tietjen-Smith, 2018; McCune, 2018). However, workload and increased professional responsibilities only negatively influenced completion rates for the enrolled group faculty. This finding suggests that other factors, such as the perception that the training was relevant to the completed group’s job responsibilities, supported them in completion.

Enrolled group faculty were also negatively influenced by the university-sponsored accessibility and UDL training's relevance to their job responsibilities. Although the enrolled group faculty voluntarily registered for the training, the group found the training irrelevant, potentially impacting their completion status. Three, 75%, of the enrolled group faculty indicated that they were already familiar with accessibility principles, meaning that their existing knowledge of accessibility could have made the training feel irrelevant and repetitive. Once faculty perceived the training to be irrelevant to their needs, faculty may have chosen to abandon or deprioritize the training. If faculty perceive professional development as nonessential, faculty may be prone to focus instead on essential tasks or tasks that have a more immediate impact. Alternatively, faculty may have also decided to deprioritize the training relative to their other tasks. For example, Michael (E) shared that after his son's accident, his personal responsibilities decreased his time available to complete the training. Faculty may discontinue specific tasks simply because there is not enough time to complete them all (Rienties et al., 2013).

One pattern was the use of supporting factors, such as their positive learning experience in the training and the impact of the institutional mandate on accessibility, to aid faculty in overcoming barriers to completion. The completed group's positive learning experience was primarily a result of the training design and the relevance of the training to their job duties. In contrast, another pattern shows how numerous barriers to completion were compounded for the enrolled group, such as negative learning experience coupled with an increased workload during the time they were enrolled in the training (Sener & Hawkins, 2007). Their increase in workload was partially caused by the lack of institutional support for accessibility remediation.

Theme 4: Personal Considerations & Commitments. In addition to increased professional responsibilities, the findings suggest that increased personal responsibilities act as barriers to faculty participation and completion in online faculty development. Efu (2020) and Caffarella and Zinn (1999) explained that personal commitments might be adverse to faculty development participation due to a lack of familial support, family schedules, and major life events. Although most faculty participants did not share experiences relevant to personal considerations and commitments, the impact on the university-sponsored accessibility and UDL training's completion status was significant for some.

During their participation in the university-sponsored accessibility and UDL training, personally traumatic events significantly impeded Michael (E) and Sora's (E) ability to complete the training. The time the participants might typically devote to additional activities, such as professional development, had to be used to address their personal and familial wellbeing. Therefore, they were not able to overcome this barrier to completion. Further, learning is greatly reduced when a learner is overly stressed (Sousa, 2012). The stress of the personal events in their lives could have contributed to their negative learning experience in the university-sponsored accessibility and UDL training.

Although Ruby (C) completed the university-sponsored accessibility and UDL training, she also noted how increased personal responsibilities limited her training participation. Not only did she have a heavy workload and increased professional responsibilities, but she also had the increased personal responsibility of dealing with her

autistic children, who were out of school for the holiday season. Therefore, she had to be better at time management during her participation to overcome this barrier.

These findings reveal a pattern that faculty's personal lives can affect their ability to participate in or complete online faculty development (Wang et al., 2003). During times of personal crisis or increased personal responsibilities, extra activities such as professional development get deprioritized so that other significant matters can take precedence (Takiya, Archibold, & Berge, 2005).

Theme 5: Frames of Reference. The findings of the study support that frames of reference can affect faculty's participation and completion of online professional development (Dailey-Hebert et al., 2014; Sabagh & Saroyan, 2014; Shagrir, 2017; Steinert et al., 2010). Faculty from both groups shared similar frames of reference in their learning preferences, belief in continuous development, and a perception that faculty can make a difference in students' lives—all faculty participants held at least one of these frames of references, while many held multiple. The completed and enrolled groups' frames on continuous development likely influenced their decision to register for the university-sponsored accessibility and UDL training, even though the training modality was outside their learning preferences. The perception of improving student lives was an influential factor for the completed group faculty. Rey (C) and Sora (E) both illustrated this pattern by recounting their experiences with students with disabilities.

The amount of voluntary professional development that faculty participated in suggested that faculty had a positive frame of reference regarding their continued development. Positive frames of reference related to their continued development and faculty impact on students initially influenced the faculty to register for and participate in

the training. Both groups shared a preference for informal development, which is consistent with the literature (Courtney, 2018; Goodale et al., 2002; Grover et al., 2016). As mentioned, the institutional mandate on accessibility was related to course materials meeting web content accessibility guidelines, not the university-sponsored accessibility and UDL training. Faculty could have learned the necessary information to comply with the mandate in various ways, both internal and external to the university. Thus, it is interesting that participants in this study strayed from their learning preference when they registered for the online asynchronous accessibility and UDL training. This choice may indicate a need for a more structured learning environment for some topics, such as the process-oriented nature of remediating various file types to meet accessibility guidelines. The enrolled group faculty's learning preferences may have been a barrier to their completion in the university-sponsored accessibility training as they shared more negative experiences in online faculty development than their counterparts.

Seven of the study participants, 88%, suggested that they understood and believed in the accessibility of their course materials from a legal, financial, or ethical perspective. The idea that faculty in both groups shared this sentiment is essential. The shared belief indicates that while the frames of reference related to student impact may have supported both groups to participate, it only supported the completed group to completion. In other words, the perception that faculty can make a difference in students' lives may have supported the enrolled group's participation, but not their completion of the training. Both groups had a clear understanding of the importance of the information presented in the university-sponsored accessibility and UDL training, a main principle of andragogy (Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015). However, this frame of

reference was not strong enough to overcome the enrolled group's barriers and support their completion. This pattern supports previous research findings that suggest participants have more positive training results when they have both motivation to participate and a positive experience in the training (Mathieu et al., 1992).

Frames of reference related to a belief in continued development and a perception that faculty can make a difference in students' lives appear to increase faculty professional development registration. However, it is not clear if these frames of reference support completion rates. Additionally, as the six of the eight faculty, 75%, preferred informal learning development, faculty learning preferences alone may not have had a large influence on either participation or completion rates in online faculty development.

Summary. The following interrelated components that affected the eight faculty participants participation in online training were identified: (a) the institutional mandate; (b) training's relevance to job responsibilities and interests; (c) a desire to improve their skillsets; and (d) professional responsibilities. Faculty participants had a need for the training (Theme 1: Institutional structures), the training was perceived as relevant to their job responsibilities (Theme 1: Institutional structures and Theme 3: Professional considerations and commitments), and they had a desire to improve their skillset (Theme 5: Frames of Reference). However, professional responsibilities (Theme 3: Professional considerations and commitments) often made it difficult for faculty to participate in training.

The following interrelated components that influenced the completed group's training completion status of a university-sponsored accessibility and UDL training were

identified: (a) the institutional mandate; (b) the relevance of the training content to their job responsibilities; (c) the organization and design of the LMS course; and (d) the perception that the training could have a direct impact on their teaching and therefore their students. Faculty participants in the completed group saw a need for the training (Theme 1: Institutional structures and Theme 5: Frames of reference), had an opportunity to take relevant training (Theme 1: Institutional structures and Theme 3: Professional considerations and commitments), had a positive experience during the training (Theme 2: Training and facilitation), and aimed to help their students (Theme 5: Frames of reference).

Conversely, the following components influenced the enrolled group's training completion status of a university-sponsored accessibility and UDL training: (a) a heavy workload plus an increase in professional responsibilities; (b) a lack of meaningful support from the institution; (c) an increase in personal responsibilities; and (d) a negative experience during the training. Faculty participants in the enrolled group were challenged with heavy workloads and increased professional responsibilities (Theme 3: Professional considerations and commitments), had no support from the university (Theme 1: Institutional structures), found the university-sponsored accessibility and UDL training to be irrelevant to their responsibilities (Theme 2: Training and facilitation and Theme 3: Professional considerations and commitments) and had personal issues to endure (Theme 4: Personal responsibilities and commitments).

Based on findings from this study and past research, multiple interrelated components support and impede faculty participation and completion of online faculty development. This study's findings indicate that the factors influencing participation

were similar for both groups. Positive factors influencing participation included the institutional mandate, the perception that faculty can make a difference in the lives of students, and a belief in continuous development. Negative factors influencing participation included professional and personal responsibilities and poor training and facilitation. Further, completers and non-completers had some of the same barriers to completion, such as increased workload. However, non-completers faced more barriers to completion than their counterparts, such as increased personal responsibilities and negative training experience, indicating that multiple barriers correlate to a reduction in completion rates. For completers, frames of reference and positive learning experience in the training, which could be linked to their learning preferences, supported their efforts in completing the training.

Implications for Practice

Using the events and patterns discovered from the data collected in this study, several relationships, or systemic structures, can be realized. The structure of a system is where one looks for leverage points, or places within the system where changes can create lasting and significant improvements. However, these leverage points are often difficult to identify and can be counterintuitive. Further, leverage points are difficult to generalize to other systems, meaning a leverage point for the institution in this study may not be an effective leverage point in another institution, however similar they may be (Meadows, 2008). Despite this, by applying systems thinking to current and related findings, researchers and practitioners can begin to craft the desired reality of faculty professional development programming in higher education (Meadows, 2008; Monat & Gannon, 2015). This study serves as one attempt to begin the process of identifying

opportunities for change within the structure of higher education to reach that desired reality.

There are many feedback loops and interrelated parts within a system that have specific goals that may serve as leverage points (e.g., offering more flexible professional development options). However, it is most effective to apply the findings to the goal of the entire system as that is a higher leverage point. If the institution's goals are clear, other leverage points will fall into place (Meadows, 2008). Therefore, I first consider how a change to the system of higher education can potentially reduce barriers such as workload and irrelevant faculty development. Although, Condon et al. (2016) vehemently disagreed with this notion, mental models that "institutions of higher learning appear to have lost sight of their primary obligation to educate undergraduates and put that obligation before all else" (Lucas, 1996, p. 173) linger. Rather than continuing to let this perception infiltrate academia, politicians, administrators, researchers, and stakeholders are called to reevaluate the current models of higher education institutions (e.g., community colleges, research universities, women's colleges) and the goals those institutions strive to achieve. The principle is not to ask that all tier-one universities, for example, reprioritize their goals so that teaching and learning are always dominant. The most powerful leverage point is realizing that there is no singular paradigm for every system (Meadows, 2008). Instead, the idea is one clear direction for the institution, developed through feedback from all stakeholders (i.e., students, faculty, politicians, grant-making agencies), communicated throughout the entire organizational hierarchy, and aligned to job performance assessments. This practice would also require a

realignment of workload distribution and tenure and promotion processes. In practice, this recommendation may include some of the following actions, but likely many more:

- Evaluate and (potentially) redevelop the institution's mission based on feedback from all stakeholders.
- Conduct an institutional-level systems analysis to determine leverage points.
- Create information flows so that the entire institution benefits from and receives appropriate information.
- Realign services and supports to be parallel with the institution's goals, such as
    - client (i.e., student) expectations and measures, including course evaluations;
    - job performance expectations and measures, including incentive and reward systems such as tenure and promotion; and
    - training and development, including faculty professional development.

The identification of balancing feedback loops in higher education institutions can initiate change by imparting a proactive versus reactive mechanism to the system (Meadows, 2008). The present study revealed that barriers to online faculty development were compounded in a way that offsets supports. Therefore, barriers should be lowered, but support mechanisms should also be strengthened. Organizing developmental activities at the college or department levels that coincide with faculty meetings is one method to resolve faculty development scheduling barriers. Institutionally,

administrators have the power to restructure faculty appointment terms and academic calendars to allow time for focused faculty development. Additionally, university administrators should set well-defined expectations of the faculty members' roles and responsibilities based on the university's strategic mission. These expectations should include tangible goals and clear priorities that are evaluated annually. Further, doctoral candidates looking to enter into faculty positions should participate in faculty, instructional, and organizational development as part of their coursework. Support systems for participation in faculty development should be created or strengthened. Proactive practices to strengthen support systems may include

- consistently identifying and removing barriers for faculty participation in professional development
- sabbatical leave, course release, or similar practices that allow time for participation in faculty development
- hiring quality presenters and training developers that are of interest and relevant to faculty
- institutional leadership that recognizes faculty who exceed their job performance goals

Concern over the infinite details, parameters, and variables of faculty professional development is one of the lowest leverage points and likely makes more of a short-term impact than other recommendations (Meadows, 2008). Practitioners could begin to reduce barriers to participation in faculty development by providing more flexible offerings. Formal professional development is too rigid to meet the varying needs and learning preferences of many faculty. However, if practitioners can introduce more

flexibility into professional development offerings, faculty may be better able to participate and complete additional offerings. Flexibility can be achieved by applying the hyflex model's principles to the training design (Beatty, 2019), thereby increasing learner choice and access. Training modalities should be highly customizable depending on the faculty members' needs. For example, practitioners should not regulate learners' pathways in professional development offerings. Faculty members should be treated as though they can appropriately identify information they have mastered versus areas that need additional development (Knowles, 1990a, 1990b, 1996; Knowles et al., 2005, 2015). Secondly, practitioners should write clear and explicit offering titles and descriptions so that faculty can gauge the relevance of the professional development to their needs (Hicks & Klimoski, 1987). Creative descriptions and catchy titles written to peak faculty interest or enrollment may reduce the clarity of the training's purpose. Inclusion of the training's targeted skill level (i.e., beginner, intermediate, advanced) and necessary prerequisite knowledge in the description allows faculty to determine if the training meets their needs (Ali et al., 2005). These recommendations for changes to training design and facilitation may have an impact for individual stakeholders within the system but are not likely to bring about profound changes to system as a whole (Meadows, 2008).

Limitations

The case study research design and the sample of faculty at a four-year research university in the southern United States means that this study's results are not generalizable to other faculty, universities, higher education institutions, or geographic locations. Neither the population nor the sample may be representative of all full-time instructional faculty (Onwuegbuzie et al., 2010). Further, the research participants were

delimited to full-time instructional faculty who registered for an online faculty development training on accessibility in course design between November 2018 and October 2019. The sampling of faculty from a population of faculty who voluntarily registered for a professional development offering may have indicated a higher level of internal or external motivation to complete professional development opportunities. Experiences from participants in the registered group were not analyzed for this study (Creswell, 2002) and could have provided further context to barriers that affect participation in online professional development. Faculty in the registered group may not have wanted to participate in the semi-structured interview related to this study because they did not actually participate in any part of the university-sponsored accessibility and UDL training.

The study assumed that the participants answered the interview questions in a manner that most accurately represented their view of the world and the situation (Merriam & Tisdell, 2016). However, at the time of initial interviews, conducted between September and October 2020, most participants had been removed from their experience in the university-sponsored accessibility and UDL training for at least a year. Three faculty had enrolled in the training almost two years before. Therefore, the participant's memory reliability is a limitation of the study and should be considered in relation to the findings (Montesperelli, 2020).

Interviews for this study were conducted during the COVID-19 pandemic. The pandemic, which caused all meetings and professional development to go virtual, could have negatively impacted faculty members' views of online professional development.

Recommendations for Research

The present study's sample size was small and limited to faculty who voluntarily registered for a specific faculty development offering. A larger, more diverse sample would provide additional insight into the factors that affect participation in online professional development. Similar studies should also be replicated at various types of higher education institutions. Further, the present study answered a call for additional research into the systematic relationships affecting professional development, but comprehensive participant characteristics were not collected as part of this study (Manduca, 2017; Rienties et al., 2013). Therefore, the field could benefit from mixed methods studies that analyze faculty development registration trends against faculty characteristics and the systematic factors that influence their completion status.

As researchers have now identified a variety of specific participation and change barriers for faculty professional development, researcher's in the field should experiment with change models to address the identified barriers. However, to more clearly understand this issue, researchers need the perspectives of a variety of stakeholders in higher education, not just faculty. Thus, future studies should include the perspectives of other institutional stakeholders, including higher education administration, politicians and policymakers, students, and community members (Lohman, 2020). Only then will a systems analysis of an institution truly be achieved.

Conclusion

The findings of the phenomenological case study supported the relationship between complex structures that influence instructional faculty members' participation in online professional development. Faculty development is only one piece of the

multifaceted system of higher education. The complexity of adult learning in the context of higher education includes considerations of adult learning theory, professional development design, faculty needs and characteristics, and the system in which all of this functions. From the macro to the micro-level, the interrelations and complexities of faculty development programming is recognized—a system's inputs and outputs are the primary considerations affecting faculty learning experiences in higher education professional development.

REFERENCES

Addleson, M. (2018). Organizing intelligence (OQ): The source of productive workplaces. In D. A. Noumair & A. B. Shani (Eds.), *Research in organizational change and development* (Vol. 26, pp. 217-263). Bingley, UK: Emerald.

Aderinto, J. A. (2006). An overview of selected theories of adult learning. *International Journal of Learning, 12*(12), 139–143. https://doi.org/10.18848/1447-9494/CGP/v12i12/45041

Adham, K., Kasimin, H., Isa, R., Othman, F., & Ahmad, F. (2015). Developing a framework for a viable research university. *Systemic Practice & Action Research, 28*(5), 503. https://doi.org/10.1007/s11213-015-9341-8

Adkoli, B. V., Al-Umran, K. U., Al-Sheikh, M. H., & Deepak, K. K. (2010). Innovative method of needs assessment for faculty development programs in a Gulf medical school. *Education for Health, 23*(3), 389.

Adkoli, B. V., & Sood, R. (2009). Faculty development and medical education units in India: A survey. *The National Medical Journal of India, 22*(1), 28-32.

Akin, G., & Asir, S. K. (2013). A new course design enhanced with andragogical principles. *International Journal on New Trends in Education & Their Implications, 4*(2), 160–170.

Ali, N. S., Hodson-Carlton, K., Ryan, M., Flowers, J., Rose, M. A., & Wayda, V. (2005). Online education: Needs assessment for faculty development. *The Journal of Continuing Education in Nursing, 36*(1), 32–38. https://doi.org/10.3928/0022-0124-20050101-09

Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. Needham, MA: Sloan Consortium.

Altbach, P. G. (2011). The past, present, and future of the research university. In P. G. Altbach, & J. Salmi (Eds.), *Road to academic excellence: The making of world-class research universities* [ProQuest Ebook Central version] (pp. 27–44). Washington, DC: World Bank Publications. https://doi.org/10.1596/9780821388051_CH01

American Institute for Research, U. S. Department of Education. (2011). Teaching *excellence in adult literacy: Adult learning theories* (TEAL Center Fact Sheet No. 11). *Retrieved* from https://lincs.ed.gov/sites/default/files/11_%20TEAL_Adult_Learning_Theory.pdf

Amos, T. Z., & Gwendoline, Q. C. L. (2019, June). *Adult learners' self-directed learning in a blended synchronous learning environment.* Paper presented at a meeting of EdMedia + Innovate Learning, Amsterdam, Netherlands.

Amstutz, D. D. (1999). Adult learning: Moving toward more inclusive theories and practices. *New Directions for Adult and Continuing Education, 82*, 19–32. https://doi.org/10.1002/ace.8202

Anderson, B. L. (1993). The stages of systemic change. *Educational Leadership, 51*(1), 14–17.

Anderson, J., & McCormick, R. (2006). Ten pedagogic principles for e-learning. In A. McCluskey (Ed.), *Policy and Innovation in Education* (pp. 10–15). Brussels, Belgium: European Schoolnet.

Archibald, M. M., Ambagtsheer, R. C., Casey, M. G., & Lawless, M. (2019). Using Zoom videoconferencing for qualitative data collection: Perceptions and experiences of researchers and participants. *International Journal of Qualitative Methods, 18*, 1–8. https://doi.org/10.1177/1609406919874596

Argyris, C. (2002). Double-loop learning, teaching, and research. *Academy of Management Learning & Education, 1*(2), 206–218. https://doi-org.libezp.lib.lsu.edu/10.5465/AMLE.2002.8509400

Atkins, S. S., Brinko, K. T., Butts, J. A., Claxton, C. S., & Hubbard, G. T. (2001). Faculty quality of life. *To Improve the Academy, 19*(1), 323–345. https://doi.org/10.1002/j.2334-4822.2001.tb00539.x

Austin, A. E. (2010). Supporting faculty members across their careers. In K. J. Gillespie & D. L. Robertson (Eds.), *A guide to faculty development: Practical advice, examples, and resources* [ProQuest Ebook Central version] (pp. 363–378). San Francisco, CA: Jossey-Bass.

Austin, A. E. (2011). *Promoting evidence-based change in undergraduate science education*. Washington, D.C.: National Academies National Research Council.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology, 41*(1), 62–105. https://doi.org/10.1111/j.1744-6570.1988.tb00632.x

Baldwin, T. T., Ford, J. K., & Blume, B. D. (2017). The state of transfer of training research: Moving toward more consumer-centric inquiry. *Human Resource Development Quarterly, 28*(1), 17.

Banathy, B. H. (1992). *A systems view of education: Concepts and principles for effective practice*. Englewood Cliffs, NJ: Educational Technology Publications.

Baran, E., & Correia, A. P. (2014). A professional development framework for online teaching. *TechTrends, 58*(5), 95-101.

Baron, L. (2006). The advantages of a reciprocal relationship between faculty development and organizational development in higher education. *To Improve the Academy, 24*(1), 29–43. https://doi.org/10.1002/j.2334-4822.2006.tb00448.x

Bates, M. S., Phalen, L., & Moran, C. (2016). Online professional development: A primer. *Phi Delta Kappan, 97*(5), 70–73. https://doi.org/10.1177/0031721716629662

Baumgartner, L. M. (2001). An update on transformational learning. *New Directions for Adult and Continuing Education, 2001*(89), 15–24. https://doi.org/10.1002/ace.4

Baumgartner, L. M. (2002). Living and learning with HIV/AIDS: Transformation tales continued. *Adult Education Quarterly, 53*(1), 44–59. https://doi.org/10.1177/074171302237203

Baumgartner, L. M., Lee, M. Y., Birden, S., & Flowers, D. (2003). Adult *learning theory: A primer. Information series.* Retrieved from ERIC database. (ED482337)

Beach, A. L., Sorcinelli, M. D., Austin, A. E., & Rivard, J. K. (2016). *Faculty development in the age of evidence: Current practices, future imperatives* [Ebook Central version]. Sterling, VA: Stylus. Retrieved from https://ebookcentral.proquest.com

Beatty, B. J. (2019). *Hybrid-flexible course design* (1st ed.). EdTech Books. Retrieved from https://edtechbooks.org/hyflex

Benito, A., & Scott-Milligan, F. (2018). Hearing the voice of faculty: Global recommendations for faculty recognition in higher education institutions. *Higher Learning Research Communications, 8*(2), 1–8. https://doi.org/10.18870/hlrc.v8i2.433

Bergquist, W. H. (1992). *The four cultures of the academy: Insights and strategies for improving leadership in collegiate organizations*. San Francisco, CA: Jossey-Bass.

Bergquist, W. H., & Pawlak, K. (2007). *Engaging the six cultures of the academy*. San Francisco, CA: John Wiley & Sons.

Bergquist, W. H., & Phillips, S. R. (1975). Components of an effective faculty development program. *The Journal of Higher Education, 46*(2), 177–211. https://doi.org/10.2307/1980880

Bertalanffy, L. V. (1950). An outline of general system theory. *The British Journal for the Philosophy of Science, 1*(2), 134–165. https://doi.org/10.1093/bjps/I.2.134

Bertalanffy, L. V. (1968). *General system theory: Foundations, development, applications*. New York, NY: George Braziller, Inc.

Bess, J. L. (1982). *University organization: A matrix analysis of the academic professions*. New York, NY: Human Sciences Press.

Bess, J. L., & Dee, J. R. (2008). *Understanding college and university organization: Theories for effective policy and practice* (Vol. 2). Sterling, VA: Stylus.

Bhattacharya, K. (2017). *Fundamentals of qualitative research: A practical guide*. New York, NY: Routledge. https://doi.org/10.4324/9781315231747

Bleich, E., & Pekkanen, R. J. (2015). Data access, research transparency, and interviews: The interview methods appendix. *Qualitative and Multi-Method Research: Newsletter of the American Political Science Association's QMMR Section, 13*(1), 8–13.

Bond, M. A., & Blevins, S. J. (2020). Using faculty professional development to foster organizational change: A social learning framework. *TechTrends, 64*(2), 229-237. https://doi.org/10.1007/s11528-019-00459-2

Booth, S. E., & Kellogg, S. B. (2015). Value creation in online communities for educators. *British Journal of Educational Technology, 46*(4), 684–698. https://doi.org/10.1111/bjet.12168

Borrego, M., & Henderson, C. (2014). Increasing the use of evidence-based teaching in STEM higher education: A comparison of eight change strategies. *Journal of Engineering Education, 103*(2), 220–252. https://doi.org/10.1002/jee.20040

Boshier, R., & Collins, J. B. (1985). The Houle typology after twenty-two years: A large-scale empirical test. *Adult Education Quarterly, 35*(3), 113–130. https://doi.org/10.1177/0001848185035003001

Boulding, K. E. (1956). General systems theory—The skeleton of science. *Management Science, 2*(3), 197–208. https://doi.org/10.1287/mnsc.2.3.197

Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Retrieved from ERIC database. (ED326149)

Brennan, J., & Magness, P. (2018). Estimating the cost of justice for adjuncts: A case study in university business ethics. *Journal of Business Ethics, 148*(1), 155-168. https://doi.org/10.1007/s10551-016-3013-1

Brinkmann, S., & Kvale, S. (2017). Ethics in qualitative psychological research. In C. Willig, & W. S. Rogers (Eds.), The SAGE handbook of qualitative research in psychology (2nd ed.) [Credo Reference version]. Thousand Oaks, CA: Sage. https://doi.org/10.4135/9781526405555.n15

Brinthaupt, T. M., Neal, A., & Otto, S. (2016). A faculty wellness workshop series: Leveraging on-campus expertise. *To Improve the Academy, 35*(2), 377–394. https://doi.org/10.1002/tia2.20045

Brockett, R. G. (1985). Methodological and substantive issues in the measurement of self-directed learning readiness. *Adult Education Quarterly, 36*(1), 15–24. https://doi.org/10.1177/0001848185036001002

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

Brookfield, S. D. (1984). Self-directed adult learning: A critical paradigm. *Adult Education Quarterly, 35*(2), 59–71. https://doi.org/10.1177/0001848184035002001

Brookfield, S. D. (1985). Analyzing a critical paradigm of self-directed learning: A response. *Adult Education Quarterly, 36*(1), 60–64. https://doi.org/10.1177/0001848185036001008

Brookfield, S. D. (1986). *Understanding and facilitating adult learning. A comprehensive analysis of principles and effective practices*. San Francisco, CA: Jossey-Bas.

Brown, M. (2019). Learning and student success: Presenting the results of the 2019 key issues survey [Article]. Retrieved from https://er.educause.edu/blogs/2019/2/learning-and-student-success-presenting-the-results-of-the-2019-key-issues-survey

Brownell, S. E., & Tanner, K. D. (2012). Barriers to faculty pedagogical change: Lack of training, time, incentives, and… tensions with professional identity? *CBE—Life Sciences Education, 11*(4), 339–346. https://doi.org/10.1187/cbe.12-09-0163

Burton, S. L. (2014). *Best practices for faculty development through andragogy in online distance education* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (Order No. 1989663912)

Caffarella, R. S. (1993). Self-directed learning. In S. B. Merriam (Ed.), *New directions for adult and continuing education* (pp. 25–35). San Francisco, CA: Jossey-Bass. https://doi.org/10.1002/ace.36719935705

Caffarella, R. S., & Zinn, L. F. (1999). Professional development for faculty: A conceptual framework of barriers and supports. *Innovative Higher Education, 23*(4), 241–254. https://doi.org/10.1023/A:1022978806131

Carpenter-Aeby, T., & Aeby, V. G. (2013). Application of andragogy to instruction in an MSW practice class. *Journal of Instructional Psychology, 40*(1), 3–13.

Centra, J. A. (1978). Faculty development in higher education. *Teachers College Record, 80*(1), 188–201.

Cervero, R. M., & Dimmock, K. H. (1987). A factor analytic test of Houle's typology of professionals' modes of learning. *Adult Education Quarterly, 37*(3), 125–139. https://doi.org/10.1177/0001848187037003001

Charungkaittikul, S., & Henschke, J. A. (2018). Creating a global sustainable lifelong learning society: An andragogical approach. *Journal of International & Global Studies, 9*(2), 76–94.

Chauvin, S. W., Bowdish, B., & Krane, N. K. (1997). *Do faculty perceive professional development differently based on their tenure status?* Retrieved from ERIC database. (ED420254)

Checkoway, B. (2001). Renewing the civic mission of the American research university. *The Journal of Higher Education, 72*(2), 125–147. https://doi.org/10.2307/2649319

Chen, J. C. (2014). Teaching nontraditional adult students: Adult learning theories in practice. *Teaching in Higher Education, 19*(4), 406–418. https://doi.org/10.1080/13562517.2013.860101

Chen, J. C. (2017). Self-directed learning: A deeper exploration into its origins in humanistic psychology. In V. C. X. Wang (Ed.), *Theory and practice of adult and higher education* (pp. 243-270). Charlotte, NC: Information Age.

Chen, K. D., & Chen, P. K. (2017). Research on the relation the characteristics of the faculty and the commitment to continuous improvement of motivations and student study processes. *Asia Pacific Education Review, 18*(4), 439–449. https://doi.org/10.1007/s12564-017-9500-y

Chen, K. Z., Lowenthal, P. R., Bauer, C., Heaps, A., & Nielsen, C. (2017). Moving beyond smile sheets: A case study on the evaluation and iterative improvement of an online faculty development program. *Online Learning, 21*(1), 85–111.

Chen, W., Kelley, B., & Haggar, F. (2013). Assessing faculty development programs: Outcome-based evaluation. *Journal on Centers for Teaching & Learning, 5*, 107.

Cherrstrom, C. A., & Alfred, M. V. (2020). Women's midlife career transition to tenured/tenure-track faculty in adult education. *Adult Education Quarterly, 70*(1), 44–63. https://doi.org/10.1177/0741713619867077

Chiang, L. H. (1991, October). *Higher education criticism: Do university faculty members and community professionals have different viewpoints?* Paper presented at the meeting of Mid-Western Educational Research Conference, Chicago, IL.

Ching, C. C., & Hursh, A. W. (2014). Peer modeling and innovation adoption among teachers in online professional development. *Computers & Education, 73*, 72–82. https://doi.org/10.1016/j.compedu.2013.12.011

Choy, S. (2009). Transformational learning in the workplace. *Journal of Transformative Education, 7*(1), 65-84. https://doi.org/10.1177/1541344609334720

Christians, C. G. (2000). Ethics and politics in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp.133–155). Thousand Oaks, CA: Sage.

Christie, M., Carey, M., Robertson, A., & Grainger, P. (2015). Putting transformative learning theory into practice. *Australian Journal of Adult Learning, 55*(1), 9-30.

Clark, M. C., & Wilson, A. L. (1991). Context and rationality in Mezirow's theory of transformational learning. *Adult Education Quarterly, 41*(2), 75–91. https://doi.org/10.1177/0001848191041002002

Cohen, L., Manion, L., & Morrison, K. (2015). *Research methods in education* (7th ed.). New York, NY: Routledge.

Cohen, M. Z., Steeves, R. H., & Kahn, D. L. (2000). *Hermeneutic phenomenological research: A practical guide for nurse researchers*. Thousand Oaks, CA: Sage. http://doi.org/10.4135/9781452232768

Condon, W., Iverson, E. R., Manduca, C. A., Rutz, C., & Willett, G. (2016). *Faculty development and student learning: Assessing the connections* [Project MUSE version]. Bloomington, IN: Indiana University Press. Retrieved from https://muse.jhu.edu/book/43108

Cook, C. E., & Marincovich, M. (2010). Effective practices at research universities: The productive pairing of research and teaching. In K. J. Gillespie & D. L. Robertson (Eds.), *A guide to faculty development: Practical advice, examples, and resources* [ProQuest Ebook Central version] (pp. 277–292). San Francisco, CA: Jossey-Bass.

Cook, D. A., & Steinert, Y. (2013). Online learning for faculty development: A review of the literature. *Medical Teacher, 35*(11), 930–937. https://doi.org/10.3109/0142159X.2013.827328

Coulter, X., & Mandell, A. (2016, March). W*hy do we separate adults from traditional age students?* Paper presented at the meeting of the Adult Higher Education Alliance Annual Conference, Orlando, FL.

Courtney, S. (2018). *Why adults learn: Towards a theory of participation in adult education* (Vol. 4). New York, NY: Routledge.

Courtney, S., Vasa, S., Luo, J., & Muggy, V. (1999). Characteristics *of adults as learners and implications for computer-based systems for information and instruction.* Retrieved from ERIC database. (ED451340)

Cousin, G. (2005). Case study research. *Journal of Geography in Higher Education, 29*(3), 421–427. https://doi.org/10.1080/03098260500290967

Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson Education.

Creswell, J. W. (2007). *Qualitative inquiry & research design*. Thousand Oaks, CA: Sage.

Crow, M. L., Milton, O., Moomaw, W. E., & O'Connell, W. R. (Eds.). (1976). *Faculty development centers in Southern universities*. Retrieved from ERIC database. (ED129132)

Culkin, D. T. (2018). Teaching qualitative inquiry: Experiential andragogy in military faculty development programs. *Journal of Continuing Higher Education, 66*(3), 176–187. https://doi.org./10.1080/07377363.2018.1525516

Dailey-Hebert, A., Mandernach, B. J., Donnelli-Sallee, E., & Norris, V. R. (2014). Expectations, motivations, and barriers to professional development: Perspectives from adjunct instructors teaching online. *The Journal of Faculty Development, 28*(1), 67–82.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Retrieved from Learning Policy Institute website: https://learningpolicyinstitute.org/product/teacher-prof-dev

D'Avanzo, C. (2014). Post–vision and change: Do we know how to change? *CBE-Life Sciences Education, 12*(3), 373–382. https://doi.org/10.1187/cbe.13-01-0010

DeBell, M., & Mulligan, G. (2005). *Reasons for adults' participation in work-related courses, 2002–03*. (NCES Issue Brief 2005-088). Washington, DC: National Center for Education Statistics.

deNoyelles, A., Cobb, C., & Lowe, D. (2012). Influence of reduced seat time on satisfaction and perception of course development goals: A Case study in faculty development. *Journal of Asynchronous Learning Networks, 16*(2), 85–98. https://doi.org/10.24059/olj.v16i2.257

Dirkx, J. M. (2000). *Transformative learning and the journey of individuation*. Retrieved from ERIC database. (ED448305)

Drack, M., & Schwarz, G. (2010). Recent developments in general system theory. *Systems Research and Behavioral Science, 27*(6), 601–610. https://doi.org/10.1002/sres.1013

Duarte, M., Leite, C., & Mouraz, A. (2016). The effect of curricular activities on learner autonomy: the perspective of undergraduate mechanical engineering students. *European Journal of Engineering Education, 41*(1), 91-104.

Dubrovsky, V. (2004). Toward system principles: General system theory and the alternative approach. *Systems Research and Behavioral Science, 21*(2), 109–122. https://doi.org/10.1002/sres.572

Eddy, P. L., Hao, Y., Markiewicz, C., & Iverson, E. (2019). Faculty change agents as adult learners: The power of situated learning. *Community College Journal of Research and Practice, 43*(8), 539–555. https://doi.org/10.1080/10668926.2018.1507848

Edmondson, D. R., Boyer, S. L., & Artis, A. B. (2012). Self-directed learning: A meta-analytic review of adult learning constructs. *International Journal of Education Research, 7*(1), 40–48. https://doi.org/10.1002/sres.572

Efu, S. I. (2020). An evaluative inquiry into continuing professional development: understanding faculty perceptions. *Teacher Development, 24*(5), 688-708. https://doi.org/10.1080/13664530.2020.1823463

Elliott, M., Rhoades, N., Jackson, C. M., & Mandernach, B. J. (2015). Professional development: Designing initiatives to meet the needs of online faculty. *Journal of Educators Online, 12(*1), 160–188. https://doi.org/10.9743/JEO.2015.1.2

Emerson, J. D., & Mosteller, F. (2000). Development programs for college faculty: Preparing for the twenty-first century. *Educational Media and Technology Yearbook, 25*, 26–42.

Englander, M. (2012). The interview: Data collection in descriptive phenomenological human scientific research. *Journal of Phenomenological Psychology, 43*(1), 13–35. https://doi.org/10.1163/156916212X632943

Farmer, E. A. (2004). Faculty development for problem-based learning. *European Journal of Dental Education, 8*(2), 59-66. https://doi.org/10.1111/j.1600-0579.2003.00337.x

Feldman, K. A., & Paulsen, M. B. (1999). Faculty motivation: The role of a supportive teaching culture. *New Directions for Teaching & Learning, 1999*(78), 71. http://dx.doi.org/10.1002/tl.7807

Ferreira, D., & MacLean, G. (2018). Andragogy in the 21st century: Applying the assumptions of adult learning online. *ICU Language Research Bulletin, 32*(11), 10-19.

Figlio, D. N., Schapiro, M. O., & Soter, K. B. (2015). Are tenure track professors better teachers? *Review of Economics and Statistics, 97*(4), 715-724.

Fink, L. D. (2013). The current status of faculty development internationally. *International Journal for the Scholarship of Teaching and Learning, 7*(2), 1–9. https://doi.org/10.20429/ijsotl.2013.070204

Finkelstein, M. J., Conley, V. M., & Schuster, J. H. (2016). *The faculty factor: Reassessing the American academy in a turbulent era*. Baltimore, MD: Johns Hopkins University Press.

Finlay, L. (2008). A dance between the reduction and reflexivity: Explicating the "phenomenological psychological attitude." *Journal of Phenomenological Psychology, 1*(1), 1-32. https://doi.org/10.1163/156916208X311601

Finlay, L. (2011). *Phenomenology for therapists: Researching the lived world* [ProQuest Ebook Central version]. Chichester, West Sussex: Wiley. https://doi.org/10.1002/9781119975144

Fishman, B., Konstantopoulos, S., Kubitskey, B. W., Vath, R., Park, G., Johnson, H., & Edelson, D.C. (2013). Comparing the impact of online and face-to-face professional development in the context of curriculum implementation. *Journal of Teacher Education, 64*(5), 426–438. https://doi.org/10.1177/0022487113494413

Foley, J. M., & Kaiser, L. M. (2013). Learning transfer and its intentionality in adult and continuing education. *New Directions for Adult and Continuing Education, 2013*(137), 5–15. https://doi.org/10.1002/ace.20040

Forrest, S. P., III, & Peterson, T. O. (2006). It's called andragogy. *Academy of Management Learning & Education, 5*(1), 113. https://doi.org/10.5465/amle.2006.20388390

Freire, P. (1970). *Pedagogy of the oppressed* (Myra B. Ramos, Trans.). New York, NY: Herder & Herder. (Original work published 1968)

Frenay, M., & Saroyan, A. (2010). *Building teaching capacities in higher education: A comprehensive international model* [eBook version]. Sterling, VA: Stylus.

French, P. B. (2019). *Culturally relevant practice frameworks and application in adult education*. Paper presented at the meeting of Adult Education Research Conference, Buffalo, NY.

Gaff, J. G. (1975). *Toward faculty renewal: Advances in faculty, instructional, and organizational development*. San Francisco, CA: Jossey-Bass.

Gappa, J. M., & Leslie, D. W. (1993). *The invisible faculty*. San Francisco, CA: Jossey-Bass.

Garcia, D., & Gluesing, J. C. (2013). Qualitative research methods in international organizational change research. *Journal of Organizational Change Management, 26*(2), 423–444. https://doi.org/10.1108/09534811311328416

Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly, 48*(1), 18–33. https://doi.org/10.1177/074171369704800103

Garrison, D. R., & Akyol, Z. (2015). Toward the development of a metacognition construct for communities of inquiry. *The Internet and Higher Education, 24*, 66-71. https://doi.org/10.1016/j.iheduc.2014.10.001

Garrison, T. (2006). *International business culture* (3rd ed.). Huntingdon: ELM Publications.

Gegenfurtner, A. (2019). Reconstructing goals for transfer of training in faculty development programs for higher education teachers: A qualitative documentary method approach. *Heliyon, 5*(11), 1-7. https://doi.org/10.1016/j.heliyon.2019.e02928

Gegenfurtner, A., Veermans, K., Festner, D., & Gruber, H. (2009). Motivation to transfer training: An integrative literature review. *Human Resource Development Review, 8*(3), 403-423. https://doi.org/10.1177/1534484309335970

Gentles, S. J., Charles, C., Ploeg, J., & McKibbon, K. A. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The Qualitative Report, 20*(11), 1772–1789.

Ghaffarzadegan, N., Larson, R., & Hawley, J. (2017). Education as a complex system. *Systems Research and Behavioral Science, 34*(3), 211–215. https://doi.org/10.1002/sres.2405

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: Interviews and focus groups. *British Dental Journal, 204*(6), 291–295. https://doi.org/10.1038/bdj.2008.192

Gillespie, K. J. (2010). Organizational development. In K. J. Gillespie & D. L. Robertson (Eds.), *A guide to faculty development: Practical advice, examples, and resources*

[ProQuest Ebook Central version] (pp. 379–396). San Francisco, CA: Jossey-Bass.

Given, L. M. (Ed.). (2008). *The SAGE encyclopedia of qualitative research methods* (Vol. 1). Thousand Oaks, CA: SAGE Publications. https://doi.org/10.4135/9781412963909

Gladwell, M. (2004, February). *Choice, happiness and spaghetti sauce* [Video file]. Retrieved from https://www.ted.com/talks/malcolm_gladwell_on_spaghetti_sauce

Glick, M. C. (2011). *The instructional leader and the brain: Using neuroscience to inform practice*. Thousand Oaks, CA: Sage. https://doi.org/10.4135/9781483387437

Goodale, C., Carbonaro, M., & Snart, F. (2002). Faculty of education staff development–Support of tomorrow's teachers. In D. Willis et al. (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2002* (pp. 634–638). Retrieved from ERIC database. (ED472225)

Gordan, N. (2018). *Evaluation of faculty engagement in professional learning activities: A mixed-methods study on communication processes, value, and barriers* (Doctoral dissertation). Retrieved from MOspace Institutional Repository. https://hdl.handle.net/10355/67682

Grace, A. P. (1996). Striking a critical pose: Andragogy--missing links, missing values. *International Journal of Lifelong Education, 15*(5), 382–392. https://doi.org/10.1080/0260137960150506

Grant-Vallone, E. J., & Ensher, E. A. (2017). Re-crafting careers for mid-career faculty: A qualitative study. *Journal of Higher Education Theory and Practice, 17*(5), 10-24.

The Group for Human Development in Higher Education. (1974). *Family development in a line of retrenchment*. New Rochelle, NY: Change Magazine.

Grover, K. S., Walters, S., & Turner, R. C. (2016). Exploring faculty preferences for mode of delivery for professional development initiatives. *Online Journal of Distance Learning Administration, 19*(1), 1.

Grupp, L. L. (2014). Faculty developer as change agent: A conceptual model for small institutions and beyond. *Journal on Centers for Teaching & Learning, 6*, 45–58.

Guglielmino, P. J., Guglielmino, L. M., & Long, H. B. (1987). Self-directed learning readiness and performance in the workplace. *Higher Education, 16*(3), 303–317. https://doi.org/10.1007/BF00148972

Gyurko, J., MacCormack, P., Bless, M. M., & Jodl, J. (2016). *Why colleges and universities need to invest in quality teaching more than ever* [White paper]. Retrieved from Association of College and University Educators website: http://acue.org/wp-content/uploads/2018/07/ACUE-White-Paper1.pdf

Habermas, J. (1984). *The theory of communicative action: Lifeworld and system* (T. McCarthy, Trans., Vol. 2). Boston, MA: Beacon Press.

Hadjistavropoulos, T., & Smythe, W. E. (2001). *Elements of risk in qualitative research. Ethics & Behavior, 11*(2), 163–174. https://doi.org/10.1207/S15327019EB1102_4

Hagen, M., & Park, S. (2016). We knew it all along! Using cognitive science to explain how andragogy works. *European Journal of Training and Development, 40*(3), 171-190. https://doi.org/10.1108/EJTD-10-2015-0081

Hamilton, N. (2018). Leadership of self: Each student taking ownership over continuous professional development/self-directed learning. *Santa Clara Law Review*, *58*(3), 567–600.

Hammond, D. (2008). Philosophical and ethical foundations of systems thinking. *tripleC: Communication, Capitalism, and Critique, 3*(2), 20–27. https://doi.org/10.31269/triplec.v3i2.20

Hammond, D. (2013). Systems theory and practice in organizational change and development. In D. P. Arnold (Ed.), *Traditions of systems theory: Major figures and contemporary developments* (pp. 326–344) [Ebook Central version]. Retrieved from https://ebookcentral.proquest.com/

Hammond, T. H. (2004). Herding cats in university hierarchies: Formal structure and policy choice in American research universities. In R. G. Ehrenberg (Ed.), *Governing Academia* (pp. 91–138). Ithaca, NY: Cornell University. https://doi.org/10.7591/9781501704765-007

Hansmann, H. (2012). The evolving economic structure of higher education. *The University of Chicago Law Review, 79*(1), 159.

Harackiewicz, J. M., & Sansone, C. (2000). Rewarding competence: The importance of goals in the study of intrinsic motivation. In C. Sansone & J.M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The search for optimal motivation and*

performance (pp. 79–103). San Diego, CA: Academic Press. https://doi.org/10.1016/B978-012619070-0/50026-X

Haras, C., Taylor, S. C., Sorcinelli, M. D., & von Hoene, L. (2017). Institutional commitment to teaching excellence: Assessing the impacts and outcomes of faculty development. *American Council on Education*. Retrieved from https://www.acenet.edu/Documents/Institutional-Commitment-to-Teaching-Excellence.pdf

Harvey, B. J., Rothman, A. I., & Frecker, R. C. (2006). A confirmatory factor analysis of the Oddi Continuing Learning Inventory (Ocli). *Adult Education Quarterly, 56*(3), 188–200. https://doi.org/10.1177/0741713605286167

Hathaway, D., & Norton, P. (2012). An exploratory study comparing two modes of preparation for online teaching. *Journal of Digital Learning in Teacher Education, 28*(4), 146–152. https://doi.org/10.1080/21532974.2012.10784695

Henderson, C., Beach, A., & Finkelstein, N. (2011). Facilitating change in undergraduate STEM instructional practices: An analytic review of the literature. *Journal of Research in Science Teaching, 48*(8), 952–984. https://doi.org/10.1002/tea.20439

Henderson, C., & Dancy, M. H. (2007). Barriers to the use of research-based instructional strategies: The influence of both individual and situational characteristics. *Physics Education Research, 3*(2), 1-14. https://doi.org/10.1103/PhysRevSTPER.3.020102

Henderson, C., Mestre, J. P., & Slakey, L. L. (2015). Cognitive science research can improve undergraduate STEM instruction: What are the barriers? *Policy Insights*

from the Behavioral and Brain Sciences, 2(1), 51–60. https://doi.org/10.1177/2372732215601115

Henley, C. E., & Magelssen, D. (1990). Faculty development and organizational systems behavior. *Academic Medicine, 65*(6), 406–409. https://doi.org/10.1097/00001888-199006000-00011

Henning, T. (2012). Writing professor as adult learner: An autoethnography of online professional development. *Journal of Asynchronous Learning Networks, 16*(2), 9–26. https://doi.org/10.24059/olj.v16i2.251

Henschke, J. (1989, October). *Identifying appropriate adult educator practices: Beliefs, feelings and behaviors*. Paper presented at Midwest Research-To-Practice Conference. Knoxville, TN: IACE Hall of Fame Repository.

Herman, J. H. (2012). Faculty development programs: The frequency and variety of professional development programs available to online instructors. *Journal of Asynchronous Learning Networks, 16*(5), 87–102. https://doi.org/10.24059/olj.v16i5.282

Hibbert, P., & Semler, M. (2016). Faculty development in teaching and learning: The UK framework and current debates. *Innovations in Education & Teaching International, 53*(6), 581–591. https://doi.org/10.1080/14703297.2015.1022201

Hicks, W. D., & Klimoski, R. J. (1987). Entry into training programs and its effects on training outcomes: A field experiment. *Academy of Management Journal, 30*(3), 542-552. https://doi.org/10.5465/256013

Hilgard, E. R., & Bower, G. H. (1966). *Theories of learning* (3rd ed.). New York, NY: Appleton-Century-Crofts.

Hill, H. C., Beisiegel, M., & Jacob, R. (2013). Professional development research: Consensus, crossroads, and challenges. *Educational Researcher, 42*(9), 476–48. https://doi.org/10.24059/olj.v16i5.282

Hixon, E., Buckenmeyer, J., Barczyk, C., Feldman, L., & Zamojski, H. (2012). Beyond the early adopters of online instruction: Motivating the reluctant majority. *The Internet and Higher Education, 15*(2), 102–107. https://doi.org/10.1016/j.iheduc.2011.11.005

Hoggan, C. D. (2016). Transformative learning as a metatheory: Definition, criteria, and typology. *Adult Education Quarterly, 66*(1), 57-75.

Holland, T., Sherman, S. B., & Harris, S. (2018). Paired teaching: A professional development model for adopting evidence-based practices. *College Teaching, 66*(3), 148–157. https://doi.org/10.1080/87567555.2018.1463505

Holton, E. F., Wilson, L. S., & Bates, R. A. (2009). Toward development of a generalized instrument to measure andragogy. *Human Resource Development Quarterly, 20*(2), 169–193. https://doi.org/10.1002/hrdq.20014

Hoskins, B. J. (2013). Is distance learning transformational? *The Journal of Continuing Higher Education, 61*(1), 62–63. https://doi.org/10.1080/07377363.2013.759488

Hott, B. L., & Tietjen-Smith, T. (2018). The professional development needs of tenure track faculty at a regional university. *Research in Higher Education Journal, 35*, 1-12.

Houle, C. (1961). *The inquiring mind*. Madison, WI: The University of Wisconsin Press.

Houle, C. O. (1974). The changing goals of education in the perspective of lifelong learning. *International Review of Education, 20*(4), 430–446. https://doi.org/10.1007/BF00598239

Hubbard, G. T., Atkins, S. S., & Brinko, K. T. (1998). Holistic faculty development: Supporting personal, professional, and organizational well-being. *To Improve the Academy, 17*(1), 35–49. https://doi.org/10.1002/j.2334-4822.1998.tb00341.x

Jacobs, P. (2013). *The challenges of online courses for the instructor*. Retrieved from ERIC database. (ED1064633)

Janakiraman, S., Watson, S. L., & Watson, W. R. (2018). Adult learners' use of self-directed learning strategies in a massive open online course. *Journal of Ethnographic & Qualitative Research, 13*(2), 122–133.

Jin, M. H., & McDonald, B. (2017). Understanding employee engagement in the public sector: The role of immediate supervisor, perceived organizational support, and learning opportunities. *The American Review of Public Administration, 47*(8), 881-897. http://doi.org/10.1177/0275074016643817

Johnson, B. A. (2014). Transformation of online teaching practices through implementation of appreciative inquiry. *Online Learning, 18*(3), 1-21.

Johnson, T., Wisniewski, M. A., Kuhlemeyer, G., Isaacs, G., & Krzykowski, J. (2012). Technology adoption in higher education: Overcoming anxiety through faculty boot camp. *Journal of Asynchronous Learning Networks, 16*(2), 63–72. https://doi.org/10.24059/olj.v16i2.240

Jones, A. R. (2013). Increasing adult learner motivation for completing self-directed e-learning. *Performance Improvement*, 52(7), 32–42. https://doi.org/10.1002/pfi.21361

Ju, B. (2019). The roles of the psychology, systems and economic theories in human resource development. *European Journal of Training and Development, 43*(1/2), 132-152. http://dx.doi.org/10.1108/EJTD-02-2018-0020

Kane, R., Sandretto, S., & Heath, C. (2002). Telling half the story: A critical review of research on the teaching beliefs and practices of university academics. *Review of Educational Research, 72*(2), 177–228. https://doi.org/10.3102/00346543072002177

Kanfer, R., & Chen, G. (2016). Motivation in organizational behavior: History, advances, and prospects. *Organizational Behavior and Human Decision Processes, 136*, 6–19. https://doi.org/10.1016/j.obhdp.2016.06.002

Karagiorgi, Y., Kalogirou, C., Theodosiou, V., Theophanous, M., & Kendeou, P. (2008). Underpinnings of adult learning in formal teacher professional development in Cyprus. *Journal of In-Service Education, 34*(2), 125–146. https://doi.org/10.1080/13674580802003466

Karash, R. (n.d.). *How to see 'structure.'* The Systems Thinker. Retrieved from https://thesystemsthinker.com/how-to-see-structure/

Kast, F. E., & Rosenzweig, J. E. (1972). General systems theory: Applications for organization and management. *Academy of Management Journal, 15*(4), 447–465. https://doi.org/10.2307/255141

Kasten, K. L. (1984). Tenure and merit pay as rewards for research, teaching, and service at a research university. *The Journal of Higher Education, 55*(4), 500–514. https://doi.org/10.2307/1981445

Kennedy, M. M. (2016). How does professional development improve teaching? *Review of Educational Research, 86*(4), 945–980. https://doi.org/10.3102/0034654315626800

Kerka, S. (2002). *Teaching adults: Is it different? Myths and realities*. Retrieved from ERIC database. (ED468614)

Kezar, A., & Maxey, D. (2014). Faculty matter: So why doesn't everyone think so. *Thought & Action, 2014*, 29–44.

Kim, D. H. (1999). *Introduction to systems thinking* (Vol. 16). Waltham, MA: Pegasus Communications.

King, A. (1993). From sage on the stage to guide on the side. *College Teaching, 41*(1), 30–35. https://doi.org/10.1080/87567555.1993.9926781

Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Chicago, IL: Follett.

Knowles, M. S. (1990a). Adult learning: Theory and practice. In L. Nadler & Z. Nadler (Eds.), *The handbook of human resource development* (2nd ed., pp. 78–85). New York, NY: John Wiley & Sons.

Knowles, M. S. (1990b). *The adult learner: A neglected species* (4th ed.). Houston, TX: Gulf.

Knowles, M. S. (1996). Adult learning. In Robert L. Craig (Ed.), *The ASTD training & development handbook: A guide to human resource development* (4th ed., pp. 253–265). New York, NY: McGraw Hill.

Knowles, M. S., Holton, E. F., & Swanson, R. (2005). The *adult learner: The definitive classic in adult education and human resource development* (6th ed.). Burlington, MA: Elsevier. https://doi.org/10.4324/9780080481913

Knowles, M. S., Holton, E. F., & Swanson, R. (2015). *The adult learner: The definitive classic in adult education and human resource development* (8th ed.) [ProQuest Ebook Central version]. New York, NY: Routledge.

Koehler, M. J., Mishra, P., Kereluik, K., Shin, T. S., & Graham, C. R. (2014). The technological pedagogical content knowledge framework. In J. M. Spector, M. D. Merrill, J. Elen, M. J. Bishop (Eds.), *Handbook of research on educational communications and technology* (4th ed., pp. 101-111). New York, NY: Springer.

Kordova, S., Frank, M., & Miller, A. (2018). Systems thinking education—Seeing the forest through the trees. *Systems, 6*(3), 29. https://doi.org/10.3390/systems6030029

Koukis, N., & Jimoyiannis, A. (2017). Designing MOOCs for teacher professional development: Analysis of participants' engagement and perceptions. In A. Mesquita & P. Peres (Eds.), *Proceedings of the 16th European Conference on e-Learning*, *ECEL 2017* (pp. 271–280). Porto: Academic Conferences and Publishing International.

Koutsodimou, K., & Jimoyiannis, A. (2015). MOOCs for teacher professional development: Investigating views and perceptions of the participants.

Proceedings of the 8th International Conference of Education, Research and Innovation. Retrieved from https://www.researchgate.net/

Kreaden, M. B. (2002). 8: Mandatory faculty development works. *To Improve the Academy, 20*(1), 107-127. https://doi.org/10.1002/j.2334-4822.2002.tb00577.x

Kreber, C., Castleden, H., Erfani, N., & Wright, T. (2005). Self-regulated learning about university teaching: An exploratory study. *Teaching in Higher Education, 10*(1), 75–97. https://doi.org/10.1080/1356251052000305543

Kugel, P. (1993). How professors develop as teachers. *Studies in Higher Education, 18*(3), 315–328. https://doi.org/10.1080/03075079312331382241

Kumar, D. (2018). Discussing the undiscussed: What ingredients are missing in faculty development programs? *Research & Development in Medical Education, 7*(2), 64–67. http://doi.org/10.15171/rdme.2018.014

Lane, D. C., & Jackson, M. C. (1995). Only connect! An annotated-bibliography reflecting the breadth and diversity of systems thinking. *Systems Research*, *12*, 217–228. https://doi.org/10.1002/sres.3850120306

Lari, P. (2008). Understanding *teaching experiences*: *Faculty transitions from traditional to online classrooms* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (Order No. 3329281)

Larkin, M., & Thompson, A. R. (2011). Interpretative phenomenological analysis in mental health and psychotherapy research. In D. Harper & A. R. Thompson (Eds.), *Qualitative research methods in mental health and psychotherapy: A guide for students and practitioners* [ProQuest Ebook Central version] (pp. 101–116). Hoboken, NJ: Wiley-Blackwell. https://doi.org/10.1002/9781119973249.ch8

Laszlo, A., & Krippner, S. (1998). Systems theories: Their origins, foundations, and development. *Advances in Psychology*, *126*, 47–76. https://doi.org/10.1016/S0166-4115(98)80017-4

Laverty, S. M. (2003). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. *International Journal of Qualitative Methods, 2*(3), 21–35. https://doi.org/10.1177/160940690300200303

Leafstedt, J. (2018). Personalized faculty development: Engaging networks, empowering individuals. *Educause*. Retrieved from https://er.educause.edu/blogs/2018/2/personalized-faculty-development-engaging-networks-empowering-individuals

Leigh, K., Whitted, K., & Hamilton, B. (2015). Integration of andragogy into preceptorship. *MPAEA Journal of Adult Education, 44*(1), 9–17.

Levinson-Rose, J., & Menges, R. J. (1981). Improving college teaching: A critical review of research. *Review of Educational Research, 51*(3), 403–434. https://doi.org/10.3102/00346543051003403

Lewis, K. G. (1996). Faculty development in the United States: A brief history. *The International Journal for Academic Development, 1*(2), 26–33. https://doi.org/10.1080/1360144960010204

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

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

Lockhart, M. (2018). *Impact of faculty development on quality of life*. Retrieved from ERIC database. (ED590253).

Loeng, S. (2018). Various ways of understanding the concept of andragogy. *Cogent Education, 5*(1), 1–15. https://doi.org/10.1080/2331186X.2018.1496643

Lohman, L. (2020). Using soft systems thinking to craft instructional design and technology interventions. *TechTrends: Linking Research and Practice to Improve Learning, 64*(5), 720–729. https://doi.org/10.1007/s11528-020-00536-x

Long, C. D. (1996). It came from Hollywood: Popular culture casts professors in a negative light. *Academe, 82*(4), 32–36.

Lounsbury, S. C., & Datubo-Brown, C. (2019). Fact *book on higher education: U.S. regions and 50 states in perspective*. Retrieved from Southern Regional Education Board website: https://www.sreb.org/fact-book-higher-education-0

Lowenthal, P. R., Wray, M. L., Bates, B., Switzer, T., & Stevens, E. (2013). Examining faculty motivation to participate in faculty development. *International Journal of University Teaching and Faculty Development, 3*(3), 149-164.

Lucas, C. J. (1996). *Crisis in the academy*. New York, NY: St. Martin's Press.

Lujan, H. L., & DiCarlo, S. E. (2006). Too much teaching, not enough learning: What is the solution? *Advances in Physiology Education, 30*(1), 17–22. https://doi.org/10.1152/advan.00061.2005

Lumina Foundation. (2019). *Who is today's student?* [White paper]. Retrieved from Lumina Foundation website: https://www.luminafoundation.org/resources/todays-student

Luna, G. (2018). Making visible our invisible faculty: Mentoring for contingent online faculty. *Journal of Higher Education Theory & Practice, 18*(2), 52–65. https://doi.org/10.33423/jhetp.v18i2.546

MacKinnon, G. E., III. (2003). An investigation of pharmacy faculty attitudes toward faculty development. *American Journal of Pharmaceutical Education, 67*(1), 49–71. https://doi.org/10.5688/aj670111

Manduca, C. A. (2017). Surveying the landscape of professional development research: Suggestions for new perspectives in design and research. *Journal of Geoscience Education, 65(*4), 416–422. https://doi.org/10.5408/17-281.1

Manning, K. (2013). Organizational theory in higher education (2nd ed.). New York, NY: Routledge.

Marks, J. L. (2003). *Fact book on higher education*. Atlanta, GA: Southern Regional Education Board.

Marks, J. L. (2011). *Fact book on higher education*. Atlanta, GA: Southern Regional Education Board.

Mathany, C., Clow, K. M., & Aspenlieder, E. D. (2017). Exploring the role of the scholarship of teaching and learning in the context of the professional identities of faculty, graduate students, and staff in higher education. *The Canadian Journal for the Scholarship of Teaching and Learning, 8*(3). https://doi.org/10.5206/cjsotl-rcacea.2017.3.10

Mathieu, J. E., Tannenbaum, S. I., & Salas, E. (1992). Influences of individual and situational characteristics on measures of training effectiveness. *Academy of Management Journal, 35*(4), 828-847. https://doi.org/10.2307/256317

Matsumoto, Y. (2016). The power of self-directed journals: Being a temporary 'other' for learning to teach. *Teacher Development, 20*(4), 521–537. http://dx.doi.org/10.1080/13664530.2016.1155475

McCune, V. (2018). Experienced academics' pedagogical development in higher education: Time, technologies, and conversations. *Oxford Review of Education, 44*(3), 307–321. https://doi.org/10.1080/03054985.2017.1389712

McKenzie, L. (2018, December 10). 50 colleges hit with ADA lawsuits [Blog post]. Retrieved from https://www.insidehighered.com

McMurtry, K. (2013). Designing online training for faculty new to online teaching. *Journal of Applied Learning Technology, 3*(2), 20–25.

McQuiggan, C. A. (2012, June). *Teaching with new eyes: Transformative faculty professional development for online teaching.* Paper presented at the meeting of Adult Education Research Conference, Saratoga Springs, NY.

Meadows, D. H. (2008). Thinking in systems: A primer (D. Wright, Ed.). White River Junction, VT: Chelsea Green.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.

Merriam, S. B. (2001a). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education, 2001*(89), 3–14. https://doi.org/10.1002/ace.3

Merriam, S. B. (2001b). Something old, something new: Adult learning theory for the twenty-first century. *New Directions for Adult and Continuing Education, 2001*(89), 93–96. https://doi.org/10.1002/ace.12

Merriam, S. B. (2004). The changing landscape of adult learning theory. In J. Comings, B. Garner, & C. Smith (Eds.), *Review of adult learning and literacy*: *Connecting research, policy, and practice* (Vol. 4, pp. 213–234). Mahwah, NJ: Routledge.

Merriam, S. B. (2018). Adult learning theory: Evolution and future directions. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists…in their own words* (2nd ed., pp. 83–96). New York, NY: Routledge. https://doi.org/10.4324/9781315147277

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. (2007). Learning in adulthood: A comprehensive guide (3rd ed.) [Credo Reference version]. San Francisco, CA: Jossey-Bass.

Merriam, S. B., & Tisdell, E. J. (2016). Qualitative research: A guide to design and implementation. San Francisco, CA: Jossey-Bass.

Meyer, K. A. (2014). An analysis of the research on faculty development for online teaching and identification of new directions. *Journal of Asynchronous Learning Networks, 17*(4), 93–112. https://doi.org/10.24059/olj.v17i4.320

Meyer, K. A., & Murrell, V. S. (2014). A national study of theories and their importance for faculty development for online teaching. *Online Journal of Distance Learning Administration, 17*(2), 1–15. https://doi.org/10.24059/olj.v18i1.355

Mezirow, J. (1995). Transformation theory of adult learning, In M. R. Welton (Ed.). *In defense of the lifeworld: Critical perspectives on adult learning* (pp. 39-70). Albany, NY: Suny Press.

Mezirow, J. (1996). Contemporary paradigms of learning. *Adult Education Quarterly, 46*(3), 158–172. https://doi.org/10.1177/074171369604600303

Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education, 1997*(74), 5–12. https://doi.org/10.1002/ace.7401

Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress.* San Francisco, CA: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA: Jossey-Bass.

Mezirow, J. (2003). Transformative learning as discourse. *Journal of Transformative Education, 1*(1), 58–63. https://doi.org/10.1177/1541344603252172

Mezirow, J. (2018). Transformative learning theory. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists…in their own words* (2nd ed., pp. 114–128). New York, NY: Routledge. https://doi.org/10.4324/9781315147277

Miller, J. G. (1965). Living systems: Basic concepts. *Behavioral Science, 10*(3), 193–237. https://doi.org/10.1002/bs.3830100302

Miller, R. M., Chan, C. D., & Farmer, L. B. (2018). Interpretative phenomenological analysis: A contemporary qualitative approach. *Counselor Education & Supervision, 57*(4), 240–254. https://doi.org/10.1002/ceas.12114

Mirick, R. G., & Wladkowski, S. P. (2019). Skype in qualitative interviews: Participant and researcher perspectives. *The Qualitative Report, 24*(12), 3061–3072.

Misra, P. (2018). MOOCs for teacher professional development: Reflections and suggested actions. *Open Praxis, 10*(1), 67–77. https://doi.org/10.5944/openpraxis.10.1.780

Mitchell, J. C. (2014). MOOCs on and off the farm: MOOCs and technology to advance learning and learning research. *Ubiquity, 2014*(June), 1–10. https://doi.org/10.1145/2591679

Monat, J. P., & Gannon, T. F. (2015). What is systems thinking? A review of selected literature plus recommendations. *American Journal of Systems Science, 4*(1), 11-26. https://doi.org/10.5923/j.ajss.20150401.02

Montesperelli, P. (2020). Memory in social research. *Trauma and Memory, 8*(2), 87-96.

Morais, R. M., Pera, M. V., Ladera, V., Oliveira, J., & García, R. (2018). Individual differences in working memory abilities in healthy adults. *Journal of Adult Development, 25*(3), 222–228. https://doi.org/10.1007/s10804-018-9287-z

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250. https://doi.org/10.1037/0022-0167.52.2.250

Morse, J. M. (1994). Designing funded qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 220–235). Thousand Oaks, CA: Sage.

Mulnix, A. B. (2016). STEM faculty as learners in pedagogical reform and the role of research articles as professional development opportunities. *CBE—Life Sciences Education, 15*(8), 1–9. https://doi.org/10.1187/cbe.15-12-0251

Murphy, C., & Jensen, T. D. (2016). Faculty teaching development: Using the multidimensional matrix of teaching development to guide teaching improvement activities. *Journal of Effective Teaching, 16*(2), 61–75.

National Center for Education Statistics. (2019). *IPEDS, Spring 2019, Fall Enrollment component (provisional data).* Washington, D.C: U.S. Dept. of Education, Institute of Education Sciences, National Center for Education Statistics.

Newman, M. (2012). Calling transformative learning into question: Some mutinous thoughts. *Adult Education Quarterly, 62*(1), 36–55. https://doi.org/10.1177/0741713610392768

Niksadat, N., Rakhshanderou, S., Negarandeh, R., Ramezankhani, A., Vasheghani Farahani, A., & Ghaffari, M. (2019). Development and psychometric evaluation of Andragogy-based Patient Education Questionnaire (APEQ). *American Journal of Health Education, 50*(6), 1–8. https://doi.org/10.1080/19325037.2019.1662860

Nohl, A. M. (2015). Typical phases of transformative learning: A practice-based model. *Adult Education Quarterly, 65*(1), 35–49. https://doi.org/10.1177/0741713614558582

Norris, N. (1997). Error, bias and validity in qualitative research. *Educational Action Research, 5*(1), 172–176. https://doi.org/10.1080/09650799700200020

Oddi, L. F. (1986). Development and validation of an instrument to identify self-directed continuing learners. *Adult Education Quarterly, 36*(2), 97–107. https://doi.org/10.1177/0001848186036002004

Oduaran, C. A., & Akanni, A. A. (2017). Work-Life balance among academics: Do gender and personality traits really matter? *Gender & Behaviour, 15*(4), 10143–10154.

O'Meara, K. (2015). A career with a view: Agentic perspectives of women faculty. *The Journal of Higher Education, 86*(3), 331-359. https://doi.org/10.1353/jhe.2015.0014

O'Meara, K., Terosky, A. L., & Neumann, A. (2008). Faculty careers and work lives: A professional growth perspective. *ASHE Higher Education Report, 34*(3), 1–221. https://doi.org/10.1002/aehe.v34:3

Onwuegbuzie, A. J., Leech, N. L., & Collins, K. M. (2010). Innovative data collection strategies in qualitative research. *Qualitative Report, 15*(3), 696–726.

Organization for Economic Cooperation & Development (OECD). (2007). How the brain learns throughout life. In *Understanding the Brain: The Birth of a Learning Science* (pp. 35–58). Retrieved from https://read.oecd-ilibrary.org/education/understanding-the-brain-the-birth-of-a-learning-science_9789264029132-en#page1

O'Sullivan, E. (2005). Emancipatory hope. In J. P. Miller, S. Karsten, D. Denton, D. Orr, & I. C. Kates (Eds.), *Holistic learning and spirituality in education*, (pp. 69–78). New York, NY: State University of New York Press.

Ott, M., & Cisneros, J. (2015). Understanding the changing faculty workforce in higher education: A comparison of full-time non-tenure track and tenure line experiences. *Education Policy Analysis Archives, 23*(90), 1–28. http://dx.doi.org/10.14507/epaa.v23.1934

Owen, T. R. (2002). *Self-directed learning in adulthood: A literature review*. Retrieved from ERIC database. (ED461050)

Parr, C. (2013, May 10). Not staying the course [Blog post]. *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/

Pascoe, D. (2006). What is systems theory? *TechTrends: Linking Research & Practice to Improve Learning, 50*(2), 20–26. https://doi.org/10.1007/s11528-006-7614-x

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Thousand Oaks, CA: Sage.

Peltz, D. P. (2019). Andragogy, culture, and adult learning worldviews. In D. P. Peltz & A. C. Clemons (Eds.), *Multicultural andragogy for transformative learning* (pp. 92–114). Hershey, PA: IGI Global. https://doi.org/10.4018/978-1-5225-3474-7

Persellin, D. C., & Goodrick, T. (2010). Faculty development in higher education: Long-term impact of a summer teaching and learning workshop. *Journal of the Scholarship of Teaching and Learning, 10*(1), 1–13.

Phuong, T. T., Duong, H. B., & McLean, G. N. (2015). Faculty development in Southeast Asian higher education: A review of literature. *Asia Pacific Education Review, 16*(1), 107-117. https://doi.org /10.1007/s12564-015-9353-1

Pietkiewicz, I., & Smith, J. A. (2014). A practical guide to using interpretative phenomenological analysis in qualitative research psychology. *Psychological Journal, 20*(1), 7–14. https://doi.org/10.14691/CPPJ.20.1.7

Pink, D. (2009). The *puzzle of motivation* (Video file). Retrieved from http://www.danpink.com/resource/ted-talk-the-puzzle-of-motivation/

Plews, R. (2017). Self-direction in online learning: the student experience. *International Journal of Self-Directed Learning, 14*(1), 37–57.

Pololi, L., Clay, M. C., Lipkin, M., Jr., Hewson, M., Kaplan, C., & Frankel, R. M. (2001). Reflections on integrating theories of adult education into a medical school faculty development course. *Medical Teacher, 23*(3), 276–83. https://doi.org/10.1080/01421590120043053

Ponton, M. K. (2018). Self-efficacy in autonomous learning: A preliminary study of full professors. *International Journal of Self-Directed Learning, 16*(1), 12-18.

Porter, W. W., & Graham, C. R. (2016). Institutional drivers and barriers to faculty adoption of blended learning in higher education. *British Journal of Educational Technology, 47*(4), 748-762. https://doi.org/10.1111/bjet.12269

Post, P. A. (2011). Trial by hire: The seven stages of learning to teach in higher education. *Contemporary Issues in Education Research, 4*(12), 25–34. https://doi.org/10.19030/cier.v4i12.6659

Pouratashi, M., & Zamani, A. (2017). How faculty members' personality traits influence their education-research performance. *New Educational Review, 50*(4), 70–82. https://doi.org/10.15804/tner.2017.50.4.06

Pouvreau, D. (2013). The hermeneutical system of general systemology. In D. P. Arnold (Ed.), *Traditions of systems theory: Major figures and contemporary developments* (pp. 84–136) [Ebook Central version]. Retrieved from https://ebookcentral.proquest.com/

Powell, C. G., & Bodur, Y. (2019). Teachers' perceptions of an online professional development experience: Implications for a design and implementation framework. *Teaching and Teacher Education, 77*, 19–30. https://doi.org/10.1016/j.tate.2018.09.004

Powell, D. H. (2006). *Barriers that affect faculty development participation at military colleges* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses Global. (Order No. 3213407)

Pratt, D. D. (1993). Andragogy after twenty-five years. In S. B. Merriam (Ed.), *An update on adult learning theory. New directions for Adult and Continuing Education* (Vol. 57, pp. 15–24). San Francisco, CA: Jossey Bass. https://doi.org/10.1002/ace.36719935704

Prebble, T., Hargraves, H., Leach, L., Naidoo, K., Suddaby, G., & Zepke, N. (2004). *Impact of student support services and academic development programmes on student outcomes in undergraduate tertiary study: A synthesis of the research: Report to the Ministry of Education.* Wellington: Ministry of Education.

President's Council of Advisors on Science and Technology (PCAST). (2012). *Engage to excel: Producing one million additional college graduates with degrees in science, technology, engineering, and mathematics.* Washington DC: Executive Office of the President.

Ramosaj, B. (2014). Systems theory and systems approach to leadership. *ILIRIA International Review, 4*(1), 59–76. https://doi.org/10.21113/iir.v4i1.53

Rapchak, M., & Behary, R. (2013). Digital immigrants, digital learning: Reaching adults through information literacy instruction online. *Journal of Library & Information Services in Distance Learning, 7*(4), 349–359. https://doi.org/10.1080/1533290X.2013.842950

Reed, L. C. (2000). *Reflections: A systemic change model for staff development*. Retrieved from ERIC database. (ED451155)

Rees, D. (2008). Managing culture. In R. J. Turner (Ed.), *Gower handbook of project management* (4th ed., pp. 1360–1393). [ProQuest Ebook Central version]. Burlington, VT: Taylor & Francis Group.

Reese, H. W., & Overton, W. F. (1970). Models of development and theories of development. In L. R. Goulet & P. B. Baltes (Eds.), *Lifespan developmental psychology: Research and theory* (pp. 115–145). New York, NY: Academic Press. https://doi.org/10.1016/B978-0-12-293850-4.50011-X

Rienties, B., Brouwer, N., & Lygo-Baker, S. (2013). The effects of online professional development on higher education teachers' beliefs and intentions towards learning facilitation and technology. *Teaching and Teacher Education, 29*, 122–131. https://doi.org/10.1016/j.tate.2012.09.002

Rizzuto, M. (2017). Design recommendations for self-paced online faculty development courses. *Techtrends: Linking Research & Practice to Improve Learning, 61*(1), 77–86. https://doi.org/10.1007/s11528-016-0130-8

Rocca, S. J. (2010). Determining the professional development needs of faculty in a college of agriculture. *NACTA Journal, 54*(1), 69–75.

Rogach, O. V., Frolova, E. V., & Ryabova, T. M. (2019). Trajectories of building a career of a teacher within academic competition. *European Journal of Contemporary Education, 8*(2), 338–347. https://doi.org/10.13187/ejced.2019.2.338

Rogers, G. S. (2015). Part-time faculty and community college student success. *Community College Journal of Research and Practice, 39*(7), 673-684.

Rose, C., & Nyre, G. F. (1977). *Faculty development in perspectives: A systems concept*. Retrieved from ERIC database. (ED144444)

Rosser, V. J. (2004). Faculty members' intentions to leave: A national study on their worklife and satisfaction. *Research in Higher Education 45*(3): 23–234. https://doi.org/10.1023/B:RIHE.0000019591.74425.f1

Roumell, E. A. (2019). Priming adult learners for learning transfer: Beyond content and delivery. *Adult Learning, 30*(1), 15–22. https://doi.org/10.1177/1045159518791281

Rowland, F., & Volet, S. E. (1996). Self-direction in community learning: A case study. *Australian Journal of Adult and Community Education, 36*(2), 89.

Rubin, H. J. & Rubin, I. S. (2012). *Qualitative Interviewing: The Art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Rusch, E. A., & Brunner, C. C. (2013). Transforming leadership identity in a virtual environment: Learning about the leading self. *Journal of Transformative Education, 11*(1), 45–69. https://doi.org/10.1177/1541344613489351

Sabagh, Z., & Saroyan, A. (2014). Professors' perceived barriers and incentives for teaching improvement. *International Education Research, 2*(3), 18–30. https://doi.org/10.12735/ier.v2i3p18

Salmon, G., Gregory, J., Dona, K. L., & Ross, B. (2015). Experiential online development for educators: The example of the Carpe Diem MOOC. *British Journal of Educational Technology, 46*(3), 542–556. https://doi.org/10.1111/bjet.12256

Samaras, A. P., Hjalmarson, M., Bland, L. C., Nelson, J. K., & Christopher, E. K. (2019). Self-Study as a method for engaging STEM faculty in transformative change to

improve teaching. *International Journal of Teaching and Learning in Higher Education, 31*(2), 195-213.

Sandlin, J. A., Wright, R. R., & Clark, C. (2013). Reexamining theories of adult learning and adult development through the lenses of public pedagogy. *Adult Education Quarterly, 63*(1), 3–23. https://doi.org/10.1177/0741713611415836

Santos, K. V. (2018, March). *Five strategies to enhance the transfer of learning from classroom to clinical setting.* Paper presented at the meeting of Adult Higher Education Alliance Annual Conference, Orlando, FL. Retrieved from ERIC database. (ED590245)

Sappleton, N., & Lourenço, F. (2016). Email subject lines and response rates to invitations to participate in a web survey and a face-to-face interview: The sound of silence. *International Journal of Social Research Methodology, 19*(5), 611–622. https://doi.org/10.1080/13645579.2015.1078596

Saroyan, A., & Trigwell, K. (2015). Higher education teachers' professional learning: Process and outcome. *Studies in Educational Evaluation, 46*, 92-101. https://doi.org/10.1016/j.stueduc.2015.03.008

Sattler, C., & Sonntag, K. (2018). Quality cultures in higher education institutions—development of the Quality Culture Inventory. In P. Meusburger, M. Heffernan, & L. Suarsana (Eds.), *Geographies of the University* (pp. 313-327). Cham. Switzerland: Springer.

Scharmer, O. (2018). *The essentials of Theory U: Core principles and applications*. Oakland, CA: Berrett-Koehler Publishers.

Schein, E. H. (2004). *Organizational culture and leadership* (3rd ed.). San Francisco, CA: John Wiley & Sons, Inc.

Schimanski, L. A., & Alperin, J. P. (2018). The evaluation of scholarship in academic promotion and tenure processes: Past, present, and future. *F1000Research, 7*(1605), 1-21. https://dx.doi.org/10.12688%2Ff1000research.16493.1

Schneckenberg, D. (2010). Overcoming barriers for eLearning in universities – portfolio models for eCompetence development of faculty. *British Journal of Educational Technology, 41*(6), 979–991. https://doi.org/10.1111/j.1467-8535.2009.01046.x

Schuster, J. H., Wheeler, D. W., & Associates. (1990). *Enhancing faculty careers*. San Francisco, CA: Jossey-Bass.

Seaman, J. E., Allen, I. E., & Seaman, J. (2018). *Grade increase: Tracking distance education in the United States*. Retrieved from Babson Survey Research Group website: onlinelearningsurvey.com/reports/gradeincrease.pdf

Sener, J., & Hawkins, R. (2007). Factors affecting completion rates in asynchronous online facilitated faculty professional development courses. *International Journal of Instructional Technology & Distance Learning, 4*(12), 29-44.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Doubleday.

Serow, R. C. (2000). Research and teaching at a research university. *Higher Education, 40*(4), 449–463.

Shagrir, L. (2017). Teacher educators' professional development: Motivators and delayers. In P. Boyd & A. Szplit (Eds.), *Teachers and teacher educators learning*

through inquiry: *International Perspectives* (pp. 159–180). Poland: Wydawnictwo Attyka.

Sharit, J., & Czaja, S. J. (2018). Overcoming older adult barriers to learning through an understanding of perspectives on human information processing. *Journal of Applied Gerontology*, *39*(3), 233–241. http://dx.doi.org/10.1177/0733464818794574

Shattuck, J., Dubins, B., & Zilberman, D. (2011). MarylandOnline's inter-institutional project to train higher education adjunct faculty to teach online. *International Review of Research in Open & Distance Learning, 12*(2), 40–61. https://doi.org/10.19173/irrodl.v12i2.933

Shaver, D. (2017). The added value of conducting learning design meeting to the online course development process. *Techtrends: Linking Research & Practice to Improve Learning, 61*(5), 438–443. https://doi.org/10.1007/s11528-017-0205-1

Shaw, L. H., Conti, G. J., & Shaw, B. S. (2013). Youth in transition: Are they adult learners? *Journal of Adult Education, 42*(2), 34–54.

Simmons, E. H., & Sweeder, R. (2016). Lyman Briggs College: An environment supporting change. In American Association of Universities (AAU). *Improving undergraduate STEM education at research universities: A collection of case studies* (pp. 37–43). Phoenix, AZ: Research Corporation for Science Advancement.

Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative Research in Psychology, 1*(1), 39–54.

Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method, and research.* Thousand Oaks, CA: Sage.

Snyman, M., & van den Berg, G. (2018). The significance of the learner profile in recognition of prior learning. *Adult Education Quarterly, 68*(1), 24–40. https://doi.org/10.1177/0741713617731809

Soomro, T. R., & Ahmad, R. (2013). Faculty retention in higher education. *International Journal of Higher Education, 2*(2), 147–150. https://doi.org/10.5430/ijhe.v2n2p147

Sorcinelli, M. D., Austin, A. E., Eddy, P. L., & Beach, A. L. (2006). *Creating the future of faculty development: Learning from the past, understanding the present.* Bolton, MA: Anker.

Sorenson, H. (1930). Adult ages as a factor in learning. *Journal of Educational Psychology, 21*, 451–459.

Sousa, D. A. (Ed.). (2012). *Mind, brain, and education: Neuroscience implications for the classroom.* Retrieved from https://ebookcentral.proquest.com/lib/shsu/detail.action?docID=3404829

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

Stake, R. E. (2000). Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 435–454). Thousand Oaks, CA: Sage.

Stanton, C. (2005). *A construct validity assessment of the instructional perspectives inventory* (Doctoral dissertation). Available from ProQuest Dissertations & Theses Global. (Order No. 3173438)

Steinert, Y., Macdonald, M. E., Boillat, M., Elizov, M., Meterissian, S., Razack, S., … & McLeod, P. J. (2010). Faculty development: If you build it, they will come. *Medical Education, 44*(9), 900–907. https://doi.org/10.1111/j.1365-2923.2010.03746.x

Steinert, Y., Mann, K., Anderson, B., Barnett, B. M., Centeno, A., Naismith, L.,…& Dolmans, D. (2016). A systematic review of faculty development initiatives designed to enhance teaching effectiveness: A 10-year update: BEME Guide No. 40. *Medical Teacher, 38*(8), 769-786. http://dx.doi.org/10.1080/0142159X.2016.1181851

Steinert, Y., McLeod, P. J., Boillat, M., Meterissian, S., Elizov, M., & Macdonald, M. E. (2009). Faculty development: a `Field of Dreams'? *Medical Education, 43*, 42–49. https://doi.org/10.1111/j.1365-2923.2008.03246.x

Stes, A., De Maeyer, S., Gijbels, D., & Van Petegem, P. (2012). Instructional development for teachers in higher education: Effects on students' learning outcomes. *Teaching in Higher Education, 17*(3), 295–308. https://doi.org/10.1080/13562517.2011.611872

Stes, A., Min-Leliveld, M., Gijbels, D., & Van Petegem, P. (2010). The impact of instructional development in higher education: The state-of-the-art of the research. *Educational Research Review, 5*(1), 25–49. https://doi.org/10.1016/j.edurev.2009.07.001

Stockdale, S. L., & Brockett, R. G. (2011). Development of the PRO-SDLS: A measure of self-direction in learning based on the personal responsibility orientation

model. *Adult Education Quarterly, 61*(2), 161–180. https://doi.org/10.1177/0741713610380447

Suanmali, C. (1981). The core concepts of andragogy (Doctoral dissertation). Available from ProQuest Dissertations & Theses Global. (Order No. 8207343)

Sullivan, R., Burns, B., Gradel, K., Shi, S., Tysick, C., & van Putten, C. (2013). Tools of engagement project: On-demand discovery learning professional development. *Journal of Educational Technology Systems, 41*(3), 255–266. https://doi.org/10.2190/ET.41.3.d

Sunal, D., & Hodges, J. (1997, January). *Summary of national reports of innovative changes in college science teaching*. Presentation at the NOVA Leadership Forum Annual National Conference, College Park, MD.

Swanson, R. A., & Holton, E. F. (2009). *Foundations of human resource development* (2nd ed.). San Francisco, CA: Berrett-Koehler.

Sweet, C., Carpenter, R., & Blythe, H. (2017). Reaching those faculty not easily reached: How CTLs can improve participation in faculty programming through faculty innovators and online instruction. *Journal on Centers for Teaching & Learning, 9*, 73–83.

Tainsh, R. (2016). Thoughtfully designed online courses as effective adult learning tools. *Journal of Adult Education, 45*(1), 32–37.

Takiya, S., Archbold, J., & Berge, Z. (2005). Flexible training's intrusion on work/life balance. *Turkish Online Journal of Distance Education, 6*(2), 87-94.

Taylor, E. W. (1997). Building upon the theoretical debate: A critical review of the empirical studies of Mezirow's transformative learning theory. *Adult Education Quarterly, 48*(1), 34–59. https://doi.org/10.1177/074171369704800104

Taylor, E. W. (2007). An update of transformative learning theory: A critical review of the empirical research (1999–2005). *International Journal of Lifelong Education, 26*(2), 173–191. https://doi.org/10.1080/02601370701219475

Taylor, E. W. (2008). Transformative Learning Theory. *New Directions for Adult & Continuing Education*, *2008*(119), 5–15. https://doi.org/10.1002/ace.301

Taylor, E. W. (2011). Fostering transformative learning. In J. Mezirow, E.W. Taylor, & Associates, *Transformative learning in practice: Insights from community, workplace, and higher education* (pp. 3-17). San Francisco, CA: Jossey-Bass.

Taylor, E. W., & Cranton, P. (2013). A theory in progress? Issues in transformative learning theory. *European Journal for Research on the Education and Learning of Adults, 4*(1), 35–47. https://doi.org/10.3384/rela.2000-7426.rela5000

Taylor, E. W., & Laros, A. (2014). Researching the practice of fostering transformative learning: Lessons learned from the study of andragogy. *Journal of Transformative Education, 12*(2), 134-147.

Taylor, L., & Colet, N. R. (2009). Making the shift from faculty development to educational development: A conceptual framework grounded in practice. In A. Saroyan, & M. Frenay (Eds.), *Building teaching capacities in higher education: A comprehensive international model*. Sterling, VA: Stylus.

TEDx Talks. (2012, August 13). *Promoting motivation, health, and excellence: Ed Deci at TEDxFlourCity* [Video file]. Retrieved from https://www.youtube.com/watch?v=VGrcets0E6I

Thomas, T., Karr, S., Kelley, K. W., & McBane, S. (2012). Overcoming barriers to scholarly activity in a clinical practice setting. *American Journal of Health-System Pharmacy, 69*(6), 465–467. https://doi.org/10.2146/ajhp110290

Thomson, K. E., & Trigwell, K. R. (2018). The role of informal conversations in developing university teaching? *Studies in Higher Education, 43*(9), 1536–1547. https://doi.org/10.1080/03075079.2016.1265498

Thorndike, E. L. (1928). *Adult Learning*. New York, NY: Macmillan.

Thorndike, E. L. (1935). *Adult Interests*. New York, NY: MacMillan. https://doi.org/10.1037/14639-000

Tisdell, E. J. (1998). Poststructural feminist pedagogies: The possibilities and limitations of feminist emancipatory adult learning theory and practice. *Adult Education Quarterly, 48*(3), 139–156. https://doi.org/10.1177/074171369804800302

Tough, A. (1971). *The adult's learning projects. A fresh approach to theory and practice in adult learning*. Toronto, Canada: Ontario Institute for Studies in Education.

Tough, A. (1978). Major learning efforts: Recent research and future directions. *Adult Education, 28*(4), 250–263. https://doi.org/10.1177/074171367802800403

Tough, A. M. (1967). *Learning without a teacher* (Vol. 3). Toronto, Canada: Ontario Institute for Studies in Education.

U.S. Department of Education. (2017). *Code of federal regulations title 34, Department of Education, part 97–protection of human subjects*. Retrieved from https://www2.ed.gov/policy/fund/reg/humansub/part97.html

van Manen, M. (2017). *Researching lived experience: Human science for an action sensitive pedagogy (*2nd ed*.)*. New York, NY: Routledge.

Wagner, S. R. (2018). The self-directed learning practices of elementary teachers. *International Journal of Self-Directed Learning, 15*(2), 18-33.

Wagner, T. (1993). Systemic change: Rethinking the purpose of school. *Educational Leadership, 51*(1), 24–28.

Wallin, D. L. (2003). Motivation and faculty development: A three-state study of presidential perceptions of faculty professional development needs. *Community College Journal of Research & Practice, 27*(4), 317–335. https://doi.org/10.1080/713838142

Wang, G., Foucar-Szocki, D., Griffen, O., O'Connor, C. & Sceiford, E. (2003). Departure, abandonment, and dropout of e-learning: Dilemma and solutions. James Madison University. Retrieved from https://www.academia.edu/1217610/Departure_abandonment_and_dropout_of_e_learning_Dilemma_and_solutions

Weathersby, R. P., & Tarule, J. M. (1980). *Adult development: Implications for higher education*. Retrieved from ERIC database. (ED191382) https://doi.org/10.1002/he.36919802904

Weimer, M., & Lenze, L. F. (1997). Instructional interventions: A review of the literature on efforts to improve instruction. In R. P. Perry & J. C. Smart (Eds.),

Effective teaching in higher education: Research and practice (pp. 205–240). New York, NY: Agathon Press.

Whitelaw, C., Sears, M., & Campbell, K. (2004). Transformative learning in a faculty professional development context. *Journal of Transformative Education, 2*(1), 9–27. https://doi.org/10.1177/1541344603259314

Whitt, E. J. (1991). "Hit the ground running": Experiences of new faculty in a school of education. *The Review of Higher Education, 14*(2), 177–197. https://doi.org/10.1353/rhe.1991.0023

Wilson, A. L., & Kiely, R. C. (2002, May). *Towards a critical theory of adult learning/education: Transformational theory and beyond*. Paper presented at the meeting of Adult Education Research Conference, Raleigh, NC.

Wlodkowski, R. J., & Ginsberg, M. B. (2008). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults* (3rd ed.). San Francisco, CA: John Wiley & Sons.

Wood, C. (2015). *Motivation to participate in faculty development: A case study of North Carolina Community College Excellence in Teaching Award winners and finalists* (Doctoral dissertation). Available from NC State Theses and Dissertation Repository. http://www.lib.ncsu.edu/resolver/1840.16/10543

Wright, M. (2014). Planning to meet the expanding volume of online learners: An examination of faculty motivation to teach online. *Educational Planning, 21*(4), 35–49.

Wright, M. (2016). Evidence-based principles for online faculty development. *Educause*. Retrieved from https://er.educause.edu/articles/2016/11/evidence-based-principles-for-online-faculty-development

Wright, R. R. (2013). Zombies, cyborgs, and other labor organizers: An introduction to representations of adult learning theories and HRD in popular culture. *New Horizons in Adult Education and Human Resource Development, 25*(1), 5–17. https://doi.org/10.1002/nha.20003

Wynants, S., & Dennis, J. (2018). Professional development in an online context: Opportunities and challenges from the voices of college faculty. *Journal of Educators Online, 15*(1), 127–139. https://doi.org/10.9743/JEO2018.15.1.2

Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *Qualitative Report, 20*(2), 134–152.

Yin, R. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, CA: Sage.

Zacher, H., Rudolph, C. W., Todorovic, T., & Ammann, D. (2019). Academic career development: A review and research agenda. *Journal of Vocational Behavior, 110*, 357-373. https://doi.org/10.1016/j.jvb.2018.08.006

Zakrajsek, T. (2016). Oh, the places your center can go: Possible programs to offer. *Journal on Centers for Teaching & Learning, 8*, 93–109.

Zhoc, K. C., & Chen, G. (2016). Reliability and validity evidence for the Self-Directed Learning Scale (SDLS). *Learning and Individual Differences, 49*, 245-250. https://doi.org/10.1016/j.lindif.2016.06.013

Zinn, L. F. (1997). *Supports and barriers to teacher leadership: Reports of teacher leaders* (Unpublished doctoral dissertation). University of Northern Colorado, Greeley, CO.

APPENDIX A

Permission to Reprint Journal Image

Sam Houston State University

March 25, 2020

Jody Perking, Center for Digital Scholarship

To Whom it May Concern:

I am in the process of creating a graduate dissertation, and I would like your permission to include the following material in this project:

1. Figure 1: Roles and Responsibilities of Faculty Developers Based on POD Network Model in Grupp, L. L. (2014). Faculty developer as change agent: A conceptual model for small institutions and beyond. Journal on Centers for Teaching & Learning, 6, 45–58.
2. Figure 2: Center Activities Categorized in Grupp, L. L. (2014). Faculty developer as change agent: A conceptual model for small institutions and beyond. Journal on Centers for Teaching & Learning, 6, 45–58.

In "Factors affecting faculty participation in online development at a higher education institution", the figures will be used to support additional research as part of the literature review. It will be available to the public through Sam Houston State University's Institutional Repository.

If you do not control the copyright on all of the above mentioned material, I would appreciate any contact information you can provide regarding the proper rights holder(s), including current address(es). Otherwise, your permission confirms that you hold the right to grant the permission requested here.

Permission includes non-exclusive world rights in all languages to use the material and will not limit any future publications-including future editions and revisions-by you or others authorized by you. The material will be attributed to you in the dissertation and a copy of the given permission will be included in the Appendix.

I would greatly appreciate your consent to my request. If you require any additional information, please do not hesitate to contact me. I can be reached at:

Crh075@shsu.edu

If you agree with the terms as described above, please sign the release form below and send it to the email contact provided above.

Sincerely,

X

Courtney R. Hebert
Doctoral candidate, Sam Houston State Uni...

Permission granted for the use of the material as described above:

Agreed to: Yes 3/26/2020 Name & Title: Editor, JCTL
Company/Affiliation: Miami Univ. Date: 3-26-2020

APPENDIX B

Your Experience in Online Professional Development – Orientation Survey

Factors Affecting Faculty Participation in Online Development At A Higher Education Institution

The purpose of this study is to discover the complex factors that influence instructional faculty members' participation in online professional development. This is a research project being conducted by Courtney R. Hebert at Sam Houston State University. Your email address was obtained from [University website] as a faculty member who registered for an online professional development offering at [University], [Course], between November 2019 and October 2019 and may be eligible to participate. Please note: this study is not part of [University department] and no data obtained therein will be shared with [University department].

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you wish to participate, please begin by completing the following orientation survey. The study is confidential; therefore, no names or other identifying information will be used when reporting data from the interview(s) and only aggregate data will be used when reporting data from the survey. By participating in this survey, you indicate that you have read and understood the above and acknowledge your consent to participate.

The person in charge of this study is Courtney R. Hebert of the Sam Houston State University Department of Library Science and Technology who is working under the supervision of Dr. Kimberly LaPrairie. If you have questions, suggestions, or

concerns regarding this study or you want to withdraw from the study their contact information is: crh075@shsu.edu and knl007@shsu.edu. If you have any questions, suggestions, or concerns about your rights as a volunteer in this research, contact the [University office and contact information] or the Office of Research and Sponsored Programs – Sharla Miles at 936-294-4875 or e-mail ORSP at sharla_miles@shsu.edu.

This survey should take no more than five minutes to complete.

To what extent do you agree with the following statement?

There are specific factors (i.e., personal, organizational, environmental, etc.) which help support instructional faculty in completing online professional development.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

To what extent do you agree with the following statement?

There are specific factors (i.e., personal, organizational, environmental, etc.) which impede instructional faculty from completing online professional development.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Do you meet the designation of full-time instructor as defined by the following definition: employees designated with a title included under “Full-time Academic Ranks” that carry faculty status and are currently the primary instructor for a credit course (or have been a primary instructor within the last two major semesters, i.e., Spring or Fall), including instructor; assistant professor; associate professor; professor; or designated professor.

- Yes
- No

If you wish to be considered for an interview to discuss the phenomena of participation in online faculty development further, please include your [University] e-mail address here.

[enter email here]

Click the submit button below to submit your responses.

APPENDIX C

Consent Script and Interview Protocol

Welcome! Thank you for your time. Before we begin, I would like to confirm your consent to participate in the study and have the interview recorded. [Yes=Continue; No=Terminate] I will ask you to confirm this again during the recording. [Start recording].

My name is Courtney Hebert, and I am a doctoral candidate of Instructional Systems Design & Technology at Sam Houston State University. You have been asked to participate in the research because you are a full-time faculty member who registered for an online faculty development training between November 2018 and October 2019. I hope that data from this research will provide insight into the systematic relationship between factors influencing faculty participation in online professional development.

The research is relatively straightforward, and we do not expect the research to pose any risk to any of the volunteer participants. Any data obtained from you will only be used for the purpose of analyzing your experience in an online faculty development training. Under no circumstances will you or any other participants who participated in this research be identified. In addition, your data will remain confidential. You will not be paid or otherwise compensated for your participation in this project.

The audio and video recording will be available for your review for the duration of the research study. Within seven days of your interview, you will receive an audio transcript and research field notes, and you will have one seven-day period to review the information and clarify any information or interpretations. Audio and video recordings

and audio transcripts will be kept for three years after the research study is complete and then destroyed.

Your participation in this research is voluntary. Your decision whether or not to participate will involve no penalty or loss of benefits to which you are entitled, and you may discontinue participation at any time. Do you have any questions?

Do you consent to participate in the research study and the recording of this interview? [Yes=Continue; No=Terminate]

1. Can you tell me about your primary role at this institution?
    a. Possible prompts: What are your primary responsibilities?

I am going to ask about your participation in professional development between January 2019 and December 2019. In this case, I am interested in any formal or informal event, training, or self-regulated learning that you took part in regarding personal, organizational, or instructional development.

2. Can you please describe your experience with professional development training in the past twelve months?
    a. Possible prompts: How many? What types? What modalities? Does a specific positive or negative experience stand out? What was that like?
3. What factors influence your decision to participate in professional development?
    a. Possible prompts: The modality? The topic? The institution? Relationships? Your personality? Other factors? Are those factors different in completing professional development?

Now I am going to ask about your participation in a specific professional development training that took place between November 2018 and December 2019.

According to records obtained from [university website], you registered for an online professional development training offered by [university department], titled [Course] in [specify month and year].

4. Can you describe your experience in the [Course] training created and offered by the university department, [university department]?
    a. Possible prompts: What happened? What did you think about the training before/after you registered? What made you think that? How did registering for the course impact your primary role?
5. Can you describe what your life was like during the time you were enrolled in the [Course] training created and offered by the university department, [university department]?
    a. Possible prompts: Increased/decreased work responsibilities? Increased/decreased home responsibilities? Increased/decreased personal or professional pressure?
6. How did your primary role and responsibilities affect your participation in the [Course] training created and offered by the university department, [university department]?
    a. Possible prompts: the institution? Relationships? Your personality? Other factors?
7. [Choose either a or b depending on the participants completion status of [Course]]
    a. Can you describe any specific elements that helped you to complete the [Course] training created and offered by the university department, [university department]?

    1. Possible prompts: course design? Your personality? Relationships? The institution? Other factors?

b. Can you describe any specific elements that impeded you from completing the [Course] training created and offered by the university department, [university department]?

    1. Possible prompts: course design? Your personality? Relationships? The institution? Other factors?

8. Is there anything you would like to add about your experience in the [Course] training created and offered by the university department, [university department]?

Thank you for your participation.

APPENDIX D

IRB Approvals

ACTION ON EXEMPTION APPROVAL REQUEST

Institutional Review Board

TO: Courtney Hebert

FROM: [redacted]
Chair, Institutional Review Board

DATE: June 17, 2020

RE: **IRB#** E12299

TITLE: Factors Affecting Faculty Participation in Online Development at a Higher Education Institution

New Protocol/Modification/Continuation: New Protocol

Review Date: 6/11/2020

Approved X **Disapproved**

Approval Date: 6/16/2020 **Approval Expiration Date:** 6/15/2023

Exemption Category/Paragraph: 2b

Signed Consent Waived?: Yes

Re-review frequency: Three Years

[redacted] **Proposal Number** (if applicable):

By: [redacted] Chairman

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is CONDITIONAL on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and [redacted] with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. **SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.**

* *All investigators and support staff have access to copies of the Belmont Report, [redacted] DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at* [redacted]

Version Date: 03/31/2011

Institutional Review Board (IRB) Authorization Agreement

Name of Institution or Organization Providing IRB Review:
[redacted]

IRB Registration #: 0000106 Federalwide Assurance (FWA) #, if any: 00003892

Name of Institution Relying on the Designated IRB:
Sam Houston State University

FWA #: 00002405

The Officials signing below agree that Sam Houston State University may rely on the designated IRB for review and continuing oversight of its human subjects research described below: (*check one*)

(___) This agreement applies to all human subjects research covered by Institution B's FWA.

(X) This agreement is limited to the following specific protocol(s):

Name of Research Project: Factors Affecting Faculty Participation in Online Development at a Higher Education Institution
Name of Principal Investigator: Courtney Hebert
Sponsor or Funding Agency: N/A Award Number, if any: N/A

(___) Other (*describe*):

The review performed by the designated IRB will meet the human subject protection requirements of Institution B's OHRP-approved FWA. The IRB at Institution/Organization A will follow written procedures for reporting its findings and actions to appropriate officials at Institution B. Relevant minutes of IRB meetings will be made available to Institution B upon request. Institution B remains responsible for ensuring compliance with the IRB's determinations and with the Terms of its OHRP-approved FWA. This document must be kept on file by both parties and provided to OHRP upon request.

Signature of Signatory Official (Institution/Organization A):
Date: July 15, 2020

Print Full Name: [redacted] Institutional Title: [redacted]

NOTE: The IRB of Institution A may need to be designated on the OHRP-approved FWA for Institution B.

Signature of Signatory Official (Institution B):
Date: 18 Jun 2020

Print Full Name: Chad W Hargrave Institutional Title: Associate Vice President, Office of Research and Sponsored Programs

APPENDIX E

Permission to Access Data

Sam Houston State University

July 29, 2020

[redacted]

Dear Dr. [redacted],

I am in the process of creating a graduate dissertation, and I writing to request your permission to access, collect, and utilize the following data for this project:

1. Full name and email address of all faculty who registered for "[redacted]" between November 2018 and October 2019. Information will be accessed and collected from [redacted].
2. The *completion status* (as defined by the project) of the faculty who registered for "[redacted]" between November 2018 and December 2019. Information will be accessed and collected from [redacted].

In "Factors affecting faculty participation in online development at a higher education institution", the above data will be used to select a sample of faculty to participate in interviews regarding their experience in an online professional development training. Although the overall risks of participation in the research study is low, the confidentiality of participants will be maintained throughout all data collection, and informed consent will be obtained before participation in the study. Upon completion of the project, the dissertation will be available to the public through Sam Houston State University's Institutional Repository.

If you do not have authority to provide access permission for the above data, I would appreciate any contact information you can provide. Otherwise, your permission confirms that you hold the right to grant the permission requested here.

I would greatly appreciate your consent to my request. If you require any additional information, please do not hesitate to contact me. I can be reached at:

[redacted]

If you agree with the terms as described above, please sign the release form below and send it to the email contact provided above.

Sincerely,

Courtney R. Hebert
Doctoral Candidate, Sam Houston State University

Sam Houston State University

Permission granted for the access, collection, and use of the data as described above:

Agreed to: _____ Name & Title: _____
Company/Affiliation: _____ Date: 7/31/2020

APPENDIX F

Recruiting Instruments and Communication Protocol

Participation Invitation Email

Subject: Request to Participate in Doctoral Study: Your Experience in Online Professional Development.

Dear [faculty member],

My name is Courtney Hebert. I am a doctoral student in the Instructional Systems Design & Technology Program at Sam Houston State University. I am kindly requesting your participation in a doctoral research study that I am conducting titled: Factors Affecting Faculty Participation in Online Development At A Higher Education Institution. Please note: this study is not part of [University department] and no data obtained therein will be shared with [University department].

The purpose of the study is to discover the complex factors that might influence instructional faculty members' participation in online professional development. With a better understanding of the faculty experience in online professional development, the outcome of the study is to help institutions of higher education provide more accessible and purposeful professional development to all faculty.

Your email address was obtained from [university website] as a faculty member who had registered for an online professional development offering at [University, [Course]. Your perspective would be an invaluable contribution to this study.

As a potential participant, you are being asked to complete an orientation survey (included below), which is comprised of four questions, including an option to participate in an interview. Participation in the study involves:

- Completion of the orientation survey
- At least one 60-90 minute interview via Zoom

Within two to three weeks of the initial interview, participants may be invited to participate in an additional follow-up interview to ensure complete understanding of your experience. Please see the attached document [Project Description] for more information about the study.

Participation is completely voluntary and you may withdraw from the study at any time. The study is completely confidential; therefore, no names or other identifying information will be used when reporting data from the interview(s) and only aggregate data will be used when reporting data from the survey.

If you would like to participate, please complete the orientation survey [link to orientation survey [link to orientation survey] by [date two weeks from initial email]. Thank you for your consideration!

Best,

Courtney R. Hebert

Project Description (attachment)

Project Title

Factors Affecting Faculty Participation in Online Development At A Higher Education Institution

Purpose

The purpose of the study is to discover the complex factors that influence instructional faculty members' participation in online professional development. Data

will be gathered by understanding the faculty experience of participating in online professional development at a tier one university in the southern United States.

Procedures

Participants will be asked to complete a web-based orientation survey, which involves two Likert scale questions to gather information on participant opinion. The participant will also be asked to verify if their employment status at the institution qualifies them for further participation in the study and indicate their desire to participate in an interview. The survey should take less than 10 minutes. Qualifying participants will be contacted to participate in a 60-90 minute interview to gather information on their experience participating in an online professional development training at the university. Participants may be asked to participate in a follow-up interview based on initial data analysis. Each interview will be recorded and transcribed through Zoom. The recording will be deleted from Zoom after the transcription has been received.

Risks

The research does not pose any known risks other than those encountered in daily life to any of the volunteer participants.

Benefits

The benefit of participating in this study includes the ability to help institutions of higher education provide more accessible and meaningful professional development to all faculty by gaining a clearer understanding of the factors influencing participation in an online professional development. These findings could have implications for faculty members, students, and practitioners.

Confidentiality

Results of the study may be published, but no names or identifying information will be included in the publication. No names or other identifying information will be used when reporting interview data. Survey data will only be reported as an aggregate. The data will be securely stored in a university-approved virtual location that is compliant with institutional data privacy standards. Only the researchers will have access to the information that is stored electronically without any identifying information and it will be destroyed three years from completion of the study. Printed transcripts and field notes (not to include identifying information) will be kept in a locked file cabinet that is only accessible by the researchers and all data will be destroyed three years from completion of the study.

Investigators

Courtney Hebert, PI and Doctoral Candidate (Sam Houston State University), crh075@shsu.edu

Kimberly LaPrairie, Student Advisor, Associate Professor, Instructional Systems Design & Technology, Sam Houston State University, (936) 294-3224, knl007@shsu.edu

Follow-Up Response Email to Schedule Session to Conduct Study

Subject: Re: Request to Participate in Doctoral Study: Your Experience in Online Professional Development.

Dear [faculty member],

Thank you for completing the orientation survey for the doctoral study and agreeing to participate in an interview.

To participate in the interview, we will need to schedule a 60-90 minute Zoom session. I am happy to meet during the evening or on weekends. Please let me know a

few days and times that work for you and I will send you a meeting request with the Zoom URL for joining the Zoom session.

Thank you!

Best,

Courtney R. Hebert

Meeting Request/Calendar Invitation for Participation in the Study

Subject: Your Experience in Online Professional Development. Doctoral Study Interview Session

Location: Zoom URL

Hi [Faculty member name],

The purpose of this meeting is to complete the initial interview for participation in the doctoral study. The session will take between 60 and 90 minutes to complete. If you need to select an alternate time, please let me know.

You will need a webcam, computer, and microphone or cell phone to join the meeting with audio. The password to join the Zoom room is: [enter Zoom password]. Please plan to have this available for the session. You can find out more about the technical requirements for Zoom here [link to Zoom technical requirements].

[include Zoom meeting invitation]

Thank you!

Courtney R. Hebert

Post-Interview Email to Request Member Checking

Hi [Faculty member name],

Thank you for participating in the initial interview for the doctoral study. Attached to this email, you will find a full transcript of our initial interview. In some places, the transcript has been edited for grammar and to remove filler words and false starts.

The purpose of the following exercise is to ensure accuracy in your expression and my understanding of your experience in online professional development.

Review the transcript by [date one week from initial email] and reply to this email with any ancillary contributions, such as edits, clarifications, or elaborations, to the interview transcript. Contributions should include the transcript line number and your commentary (for example, line 129: this line should say "not allowed"). If you would prefer to provide your contributions verbally, we can arrange to have a meeting at a mutually convenient time. Any narrative contributions provided will be added to the data analysis.

If there is no response received by [date one week from initial email] I will assume that there are no ancillary contributions to be made and I will proceed with data analysis of the initial interview transcript.

As a reminder, the purpose of the study is to discover the complex factors that might influence instructional faculty members' participation in online professional development. With a better understanding of the faculty experience in online professional development, the outcome of the study is to help institutions of higher education provide more accessible and purposeful professional development to all faculty.

If you have any questions, please feel free to reach out (crh075@shsu.edu).

Best,

Courtney R. Hebert

Candidate, Ed.D in Instructional Systems Design & Technology

Sam Houston State University

Post-Interview Email to Schedule Follow-up Interview Session

Subject: Re: Your Experience in Online Professional Development. Doctoral Study Follow-up Interview Request

Hi [participant name],

Thank you for participating in the initial interview for the doctoral study. There are a few follow-up questions that I would like to ask you. The interview will take between 30 and 60 minutes. If you are willing to participate in a follow-up interview, please let me know a few days and times that work for you and I will send a meeting request with the Zoom URL.

Thank you!

Courtney R. Hebert

Candidate, Ed.D in Instructional Systems Design & Technology

Sam Houston State University

Meeting Request/Calendar Invitation for Participation in Follow-up Interview Session

Subject: Your Experience in Online Professional Development. Doctoral Study Follow-up Interview

Location: Zoom URL

Dear [participant name],

The purpose of this meeting is to complete the follow-up (and final) interview for participation in the doctoral study. The session will take between 30 and 60 minutes to complete. If you need to select an alternate time, please let me know.

You will need a web-cam, computer, and microphone or cell phone to join the meeting with audio. The password to join the Zoom room is: [enter Zoom password]. Please plan to have this available for the session. You can find out more about the technical requirements for Zoom here (link to Zoom technical requirements).

[include Zoom meeting invitation]

Thank you!

Courtney R. Hebert

APPENDIX G

Interview Protocol Matrix

	Background Information	Research Question 1	Research Question 1a	Research Question 1b
Interview Q1	X			
Interview Q2		X		
Interview Q3		X		
Interview Q4			X	X
Interview Q5			X	X
Interview Q6			X	X
Interview Q7			X	X
Interview Q8	X			

VITA

Courtney R. Hebert
Department of Library Science & Technology
Sam Houston State University

Education

Ed.D., Instructional Systems Design and Technology
College of Education, Sam Houston State University 2021

M.Ed., Educational Technology Leadership, with honors (4.0)
Thesis: "Blogging in the K-12 English Classroom"
College of Education, Nicholls State University 2012

B.A., Secondary English Education, Cum Laude (3.6)
College of Education, Nicholls State University 2011

Career

Senior Learning Experience Designer
[redacted] February 2019-Present

Educational Technology Consultant
[redacted] April 2017-January 2019

Technology Coordinator
Diocese of [redacted] Catholic Schools June 2016-April 2017

High school English, Publications, and Digital Media
Diocese of [redacted] Catholic Schools August 2012-June 2016

Journal Publications (Refereed)

Hebert, C.R., & LaPrairie, K.N. (2018). Redefining instructional technology: A contemporary approach. International Journal of Instructional Technology and Distance Learning, 15(2), 3-9.

Vavasseur, C.B., **Hebert, C. R**., &, Naquin, T. S. (2013). Preservice Teachers Serving Students: Service Learning through Virtual Tutoring: A Case Study. Journal of Service Learning in Higher Education, 2, 47-61.

Journal Publications (Non-refereed)

Vavasseur, C.B., **Hebert, C. R**., &, Naquin, T. S. (2012). Preservice Teaches Tutor K-12 Students. Learning & Leading with Technology, 40(1), 28-29.

Conferences & Presentations

Hebert, C. R. (2016). Tech Starter Kit. Presentated at LACUE Conference. New Orleans, Louisiana.

Vavasseur, C.B., **Hebert, C. R**., &, Naquin, T. S. (2011). Colonel Chat. Presented at the Gulf South Summit. Hattiesburg, Mississippi.

Vavasseur, C.B., **Hebert, C. R**., &, Naquin, T.S. (2011). Colonel Chat. Presented at LACUE Conference. New Orleans, Louisiana.

Professional Service

Reviewer (Published Works)

Libraries support online learning, American Library Association CHOICE, February 2021

Teacher's place as an educator in social interaction, **in the digital age**, Journal of Educators Online, January 2021

Motivational emails at Distance University: An application to managerial accounting for tourism, Journal of Educators Online, July 2020

Metacognitive aspects influencing help-seeking behavior on collaborative online learning: A systematic literature review, Journal of Educators Online, April 2020

Developing hybrid-based TPACK learning model and measuring its effect on learning outcomes, Journal of Educators Online, October 2019

Teaching adult immigrants with limited formal education, American Library Association CHOICE, October 2019

Social media in higher education: Case studies, reflections and analysis, American Library Association CHOICE, September 2019

Instructional design for LIS professionals, American Library Association CHOICE, August 2019

Student understanding of system of equation and inequalities: A comparison between online and face-to-face learning, Journal of Educators Online, May 2019

Nontraditional doctoral student grade point average, conscientiousness and grit: A moderation analysis, Journal of Educators Online, February 2019

An innovative approach to maximize discussion board engagement and promote critical thinking, Journal of Educators Online, December 2018