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Bridging the Career Transitional Gap Between Field Experts and University Instructors: Factors Affecting New Faculty Members' Feelings of Preparedness of Teaching in Higher Education

Amy Hogan

BRIDGING THE CAREER TRANSITIONAL GAP BETWEEN FIELD EXPERTS AND UNIVERSITY INSTRUCTORS: FACTORS AFFECTING NEW FACULTY MEMBERS' FEELINGS OF PREPAREDNESS OF TEACHING IN HIGHER EDUCATION

by

Amy Hogan, M.S., R.D.N., L.D.N.

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We hereby recommend that the dissertation prepared by

Amy Hogan, M.S., R.D.N., L.D.N.

entitled **Bridging the Career Transitional Gap Between Field Experts and University Instructors: Factors Affecting New Faculty Members' Feelings of Preparedness of Teaching in Higher Education**

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Doctor of Education, Higher Education Administration Concentration

Bryan McCoy
Supervisor of Dissertation Research

Dustin Hebert
Head of Curriculum, Instruction, and Leadership

Doctoral Committee Members:
Lori Jacques
Rick Shrubb

Approved:
Don Schillinger
Dean of Education

Approved:
Ramu Ramachandran
Dean of the Graduate School

GS Form 13a
(01/20)

ABSTRACT

This quantitative study determined factors affecting preparedness for higher education teachers who have transitioned from their expert-level fieldwork into academia. It is a common practice for new university faculty members to be recruited from their areas of expertise as clinicians and practitioners (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Transitioning from a chosen field into a novice teacher can carry varying weights depending on university teaching appointments. Having the qualities of an experienced practitioner is highly desired to fill faculty roles, but the expertise as a practitioner does not necessarily develop the teaching skills (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Due to the frequent hiring of faculty with limited andragogy training, university learning outcomes can be jeopardized, and the quality of the university could suffer as a result of the lack of foundational educational knowledge teachers need to successfully possess the skill sets required in the higher education classroom setting (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016).

This study was completed using the Delphi process. The following research question was used to inform this study: What factors affect new faculty members' feelings of preparedness of teaching in higher education? The theoretical framework

used to guide this study was Herzberg's Two-Factor Theory which argues that there are two factors an organization can adjust to influence workplace motivations (Herzberg et al., 1959).

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DEDICATION

I would like to dedicate my work to all of my family for providing love, support, and encouragement throughout my doctoral program.

Mom and Dad, you instilled confidence and a love of learning in me that has carried me further than I could have ever imagined. Thank you for laying a strong foundation and giving me the tools to succeed. I know all of my grandparents would be so proud.

Nolan and Hallie, one day very soon you both will be old enough to read and comprehend this dissertation. But my biggest desire is that when that day comes, you realize just how much of this work was made possible by the sacrifices you made. I hope you learn the value of hard work and use it to set big goals for yourself.

Gabe, you have single handedly led our family with ease through this season of life and have given me all of the credit for any success along the way. You teach me something new each day, but most importantly, how to love others. Thank you for making all of my dreams come true. I will forever believe that I have the best husband in the world.

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CHAPTER 1

INTRODUCTION

The purpose of this study was to determine factors affecting feelings of preparedness for higher education teachers who have transitioned from their expert-level fieldwork into academia. The key areas of empirical research are categorized into three main sections with subcategories for greater organization and understanding. The first main pathway is Herzberg's Two-Factor Theory theoretical framework with subcategories of relevance to the problem and a review of Maslow's Hierarchy of Needs and motivational factors as well as other theories commonly used in this type of research (Herzberg et al., 1959; Maslow, 2014). The second pathway is new higher education faculty onboarding experiences and skill development with subcategories of pedagogy in higher education and online instructional methods as technology advances. The final pathway is the administrative role in new faculty onboarding processes with subcategories of common administrative challenges faced when onboarding new faculty and transition support provided through administration.

Background of the Problem

It is a common practice for new university faculty members to be recruited from their areas of expertise as clinicians and practitioners (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Transitioning from a chosen field into a

novice teacher can carry varying weights depending on university teaching appointments. Having the qualities of an experienced practitioner is highly desired to fill faculty roles, but the expertise as a practitioner does not necessarily develop the teaching skills (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Due to the frequent hiring of faculty with limited andragogy training, university learning outcomes can be jeopardized, and the quality of the university could suffer as a result of the lack of foundational educational knowledge teachers need to successfully possess the skill sets required in the higher education classroom setting (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Former president of Harvard University, Derek Bok, had strong opinions regarding this problem stating, "It's astonishing, a major failing, that the universities do not teach their future teachers. Academia is the only professional system that doesn't instruct its newcomers in how to do what they will spend most of their time doing" (Bethune, 2006, para. 2).

Limitations

Research limitations are the boundaries of the problem established that have the potential to reduce the generalizability of the results (Brenner et al., 1971; Grove et al., 2013; Kirk, 2017; Neutens & Rubinson, 2014). To avoid the following biases, the researcher identified all methods and techniques used in participant selection and in the selection of the panel of experts. Potential limitations of this study include resources, geography, survey instruments, respondent quantity, and researcher bias. Each participant in this study responded based on experiences relative to their own onboarding process which lead to varying degrees of expertise. Additionally, research bias was identified in the wording of the Delphi instrument questions (Brenner et al., 1971). The open-ended

question and comment section provided at the conclusion of the Delphi instrument helped reduce researcher bias (Kirk, 2017). The universities chosen to be included in the Delphi process are within the southern region of the United States which is a geographic limitation that could decrease generalizability potential (Kirk, 2017).

Maxwell (2013) advocated for the inclusion of researcher experience in research design. Researcher bias can be identified since this study incorporates the researcher's experiential knowledge related to the problem. The level of researcher knowledge contribution was guided by Reason's (1994) critical subjectivity by raising awareness to use it as part of the inquiry process but preventing submersion in personal experiences.

Delimitations

The participants were delimited to faculty members who have been teaching in higher education for five years or less as previous studies have noted potential differences in motivations and overall experiences (Bowker & Lynch, 1984; Serow, 2000).

Research Problem

This quantitative study determined factors affecting preparedness for higher education teachers who have transitioned from their expert-level fieldwork into academia. The review of literature delved into this specific set of circumstances that is commonly seen nation-wide and is organized into three main pathways including the theoretical lens and onboarding experiences for faculty and administration. The comprehensive search strategy used to accomplish a thorough understanding of the current literature included establishing a publication date requirement no earlier than 2015. Occasionally, older seminal pieces were identified and used that relate to historical context. The entire body of research related to the problem was reviewed to the point of saturation.

Significance of the Research Problem

The Delphi method was well suited for exploring feelings of preparedness in higher education teachers who have transitioned from their expert-level fieldwork into academia (Linstone & Turoff, 2002). Multiple higher education expert faculty member viewpoints were assimilated and valued to develop an instrument by allowing the panelists to participate in the pilot survey. The goal was to find where individual perspectives converge and identify commonalities that may exist. As a result, the Delphi method was a beneficial tool for assessing complex problems and delivering feedback for higher education faculty with the use of anonymity for group communication (Linstone & Turoff, 2002; Sandrey & Bulger, 2008). The Delphi method was appropriate to help identify employee feelings of preparedness and values within the organization which may inform an emerging set of best practices to be used by administrators to improve new faculty onboarding processes (Linstone & Turoff, 2002).

Methodology

This study used quantitative methods to determine feelings of preparedness for higher education teachers who have transitioned from their expert-level fieldwork into academia. Numerical data was obtained from the distributed instrument using Qualtrics, an online cloud-based software used to gather and analyze data, and data was analyzed statistically using version 26 of the Statistical Package for Social Sciences (SPSS).

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panelists to participate in the pilot survey. The goal was to find where individual perspectives converge and identify commonalities that may exist. As a result, the Delphi method was a beneficial tool for assessing complex problems and delivering feedback for higher education faculty with the use of anonymity for group communication (Linstone & Turoff, 2002; Sandrey & Bulger, 2008). The Delphi method was appropriate to help identify employee feelings of preparedness and values within the organization which may inform an emerging set of best practices to be used by administrators to improve new faculty onboarding processes (Linstone & Turoff, 2002).

A quantitative research design was chosen because it provides an opportunity to survey a large number of participants and quantify the problem to numerical data that was transformed into usable statistics (Muijs, 2011). Kaynardağ (2017) used a similar survey format as a traditional way of obtaining information from a large population to determine differences between pedagogically trained teachers versus non-pedagogically trained teachers. Additionally, Martin et al. (2020) distributed a survey to three major educational organizations in the United States to obtain data on faculty competence levels using virtual teaching platforms.

Definition of Key Concepts

Delphi Method: a questionnaire technique that uses the responses of experts to evaluate a topic in a specific field (Murry & Hammons, 1995; Preble, 1984).

Andragogy: the art, science, or profession of teaching with an adult-focused, two-way learning process (Merriam-Webster, 2020).

Pedagogy: the art, science, or profession of teaching with a child-focused, one-way learning process (Merriam-Webster, 2020).

Andragogy/pedagogy training: course taken for the intentional purpose of improving one's own teaching ability. This does not include minimal content exposure as a requirement of a terminal degree completion.

Instructor: any faculty member in a teaching position within the higher education organization.

Novice Teacher: any faculty member who has held a higher education teaching position for five years or less.

Feelings of Preparedness: dependent variables in this study represent feelings of preparedness such as support and training, communication from administration, and confidence in teaching.

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this literature review is to evaluate current practices for administrative leaders to assist first-time higher education faculty members as they transition from field work into academia. It is a common practice for new university faculty members to be recruited from their areas of expertise as clinicians and practitioners (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Transitioning from a chosen field into a novice teacher can carry varying weights depending on university teaching appointments. Having the qualities of an experienced practitioner is highly desired to fill faculty roles, but the expertise as a practitioner does not necessarily develop the teaching skills (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Due to the frequent hiring of faculty with limited andragogy training, university learning outcomes can be jeopardized, and the quality of the university could suffer as a result of the lack of foundational educational knowledge teachers need to successfully possess the skill sets required in the higher education classroom setting (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Former president of Harvard University, Derek Bok, had strong opinions regarding this problem stating, “It’s astonishing, a major failing, that the universities do not teach their future teachers. Academia is the only professional system

that doesn't instruct its newcomers in how to do what they will spend most of their time doing" (Bethune, 2006, para. 2).

The review of literature will delve into this specific set of circumstances that is commonly seen nation-wide and is organized into three main pathways including the theoretical lens and onboarding experiences for faculty and administration. The comprehensive search strategy used to accomplish a thorough understanding of the current literature included establishing a publication date requirement no earlier than 2015. Occasionally, older seminal pieces were identified and used that relate to historical context. The entire body of research related to the problem was reviewed to the point of saturation.

The primary databases used to find empirical research articles were EBSCO, ERIC, and JSTOR. The key search terms used to locate quality research studies were as follows: The Delphi method and Herzberg's Two-Factor Theory, the role of scholarship and teaching in faculty development, new faculty training and mentorship programs, pedagogy and andragogy training for higher education teachers, the role of administration in first year faculty, mentorship in higher education, and online professional networks in higher education. Approximately 20 empirical quantitative and qualitative research studies were used in literature review that directly related to the problem. Studies that were not peer reviewed were discarded with the exception of published book chapters and publications. Dissertations were not included in the review of literature. *The Journal of the Professoriate* and various higher education journals were primary sources for the literature review with the ideal geographical goal of pinpointing articles from within the United States to best reflect the population that will be researched in this study. Difficulty

arose in finding quality articles that studied the onboarding experiences of new faculty who once were practitioners in areas other than the medical field. There was a large database for studies surrounding scholarly teaching in faculty development as well as a new surge of availability in research on virtual teaching and technology platforms.

The key areas of empirical research are categorized into three main sections with subcategories for greater organization and understanding. The first main pathway is Herzberg's Two-Factor Theory theoretical framework with subcategories of relevance to the problem and a review of Maslow's Hierarchy of Needs and motivational factors as well as other theories commonly use in this type of research (Herzberg et al., 1959; Maslow, 2014). The second pathway is new higher education faculty onboarding experiences and skill development with subcategories of pedagogy in higher education and online instructional methods as technology advances. The final pathway is the administrative role in new faculty onboarding processes with subcategories of common administrative challenges faced when onboarding new faculty and transition support provided through administration. The extensive review of empirical studies can be found as outlined in the subsequent sections of Chapter 2.

Theoretical Framework

The theoretical framework used to guide this study is Herzberg's Two-Factor Theory (also known as Herzberg's Motivation-Hygiene Theory) which argues that there are two factors an organization can adjust to influence workplace motivations (Herzberg et al., 1959). Those two factors are as follows: motivators, also known as growth, which can encourage employees to work harder and reach their goals, and hygiene factors, also known as dissatisfaction avoidance, which will not encourage employees to work harder,

but they will cause them to become unmotivated if they are not present in the workplace. One of the most significant inferences made from the study is the confidence of Herzberg to state that "motivational factors that are intrinsic to the job are: achievement, recognition, achievement, the work itself, responsibility, and growth or advancement" (Herzberg, 1987, p. 113). The hygiene "factors that are extrinsic to the job include: company policy and administration, supervision, interpersonal relationships, working conditions, salary, status, and security" (Herzberg, 1987, p. 113).

The theory is based on one of the most replicated studies of employee attitudes which examined accountants and engineers followed by at least 16 other studies using numerous other professions and populations in their samples (Herzberg et al., 1959). Using critical incident methodology, Herzberg et al. (1959) gathered stories from participants by asking questions regarding times when they felt positively or negatively about their job. Results from the study of 1,685 employees revealed that motivators were the leading origin of job contentment and hygiene factors were the leading origin of job discontentment (Herzberg et al., 1959). The emphasis should be placed on increasing hygiene and motivating factors resulting in an environment of few grievances and highly-motivated employees. The theory states that job satisfaction and job dissatisfaction are not opposites of each other, rather, their opposites are no job satisfaction and no job dissatisfaction, respectively (Herzberg et al., 1959).

Herzberg's Two-Factor Theory Relevant to the Problem

Herzberg's Two-Factor Theory can be seen as a framework that addresses the challenge of providing sufficient resources from administration to create desirable working conditions so new higher education faculty members have feelings of job

satisfaction as they experience a career transition (Herzberg et al., 1959). Feelings of preparedness are crucial to overall job satisfaction as noted in a recent study by Martinez and Martinez (2019) where it was found that strong feelings about intrinsic job factors are present in both highest and lowest ranked non-traditional university positions. Using Herzberg's Two-Factor Theory (Herzberg et al., 1959) as the theoretical framework, Martinez and Martinez (2019) explored non-tenure track faculty to determine the connection between various job factors and outcomes. It was found that institutional practices have the highest impact among other job factors which has the potential to undermine the importance of basic needs associated with hiring and orientation processes (Martinez & Martinez, 2019). Therefore, placing value on the feelings of preparedness is important to the teaching profession as new higher education faculty members' transitions into their careers.

Similar to Martinez and Martinez (2019), Waltman et al. (2012) studied non-tenure track faculty in higher education institutions to investigate the impact of shifts in scholarly teaching among new faculty members. Using Herzberg's critical incident interviews as a starting point, Waltman et al. (2012) adapted methods to a comparable qualitative approach to determine job satisfaction among 12 research universities across the United States with differing geographical areas contexts (Herzberg et al., 1959). Focus groups were conducted in 90-minute increments requiring all 220 non-tenure track participants to respond to the same questions but also gave flexibility of additional prompts for deeper understanding as new applicable content surfaced (Waltman et al., 2012). The two main questions were surrounding positive and negative aspects of their jobs. Overwhelming positive responses were recorded in regard to having more flexibility

and less stress compared to tenure track colleagues. A second area of job satisfaction was seen in the actual classroom teaching experiences and student mentoring. Dissatisfaction was found predominately in the lack of opportunities for advancement work climate (Waltman et al., 2012).

The findings of Waltman et al. (2012) support those of Herzberg's motivational factors of job satisfaction of the work itself as well as job dissatisfaction within company policy and administration (Herzberg et al., 1959). In contrast, Herzberg et al. (1959) reported that factors within personal life was somewhat an irrelevant factor in their study, whereas Waltman et al. (2012) had significant findings of personal life as an important aspect of job satisfaction. Changes in participant responses can be attributed to workforce development including the growing number of women in professional roles from the time of Herzberg et al. (1959) study and the 21st century. Additionally, Herzberg et al. (1959) suggested that job dissatisfaction was not correlated with a lack of recognition, whereas Waltman et al. (2012) concluded that lack of respect and inclusion is a strong predictor of job dissatisfaction. While the well-known Herzberg's Two-Factor Theory has been used in research nationwide over the past six decades, differences can be identified in comparing results and assumptions (Herzberg et al., 1959).

Differing Assumptions of Herzberg's Framework

Numerous researchers have used Herzberg's Two-Factor Theory as their framework to guide higher education career satisfaction research projects and have come to varied deductions regarding the theory's efficacy (Herzberg et al., 1959; Lacy & Sheehan, 1997; Locke et al., 1983). Lacy and Sheehan (1997) examined teacher satisfaction internationally and found no significant patterns that challenge the results of

Herzberg et al. (1959). In contrast, Locke et al. (1983) rejected Herzberg's Two-Factor Theory due to lack of significant consistent findings in succeeding research data (Herzberg et al., 1959). Smerek and Peterson (2007) suggest that Herzberg's critical incident methodology should not apply to surveys, yet it was later used in multiple job satisfaction studies (Herzberg et al., 1959). While there have been competing theories that suggest Herzberg's Two-Factor Theory does not adequately explain the multifaceted topic of job satisfaction, no greater instructive instrument has been developed (Herzberg et al., 1959).

Other Theories Related to the Problem

Maslow's Hierarchy of Needs Theory has historically been compared to Herzberg's Two-Factor Theory due to their parallels through the lower needs of Maslow and the extrinsic motivators of Herzberg (Herzberg et al., 1959; Maslow, 2014). Maslow (2014) states that the five hierarchical needs from low to high are physiological, safety, belonging, esteem, and self-actualization. These basic needs must be met for an individual to be motivated, and it is suggested that the lower needs are forgotten once they are met and the next need arises (Maslow, 2014). Higher education administrators can base practices in Maslow's theory to meet the lower needs of employees (Maslow, 2014).

Key differences have also been identified between the two theories (Herzberg et al., 1959; Maslow, 2014). First, Maslow's is a general theory that expresses motivation as the variant to satisfy needs, whereas Herzberg's theory reveals that workplace variables result in job satisfaction or dissatisfaction. Second, Maslow offers an explanatory theory while Herzberg uses simple and inflexible methods. Lastly, the base of Maslow's theory

is human needs and satisfaction, and Herzberg emphasizes reward and acknowledgment (Herzberg et al., 1959; Maslow, 2014). Although there are distinct areas of differentiation, the two theories are intended to be complementary to one another rather than contradictory (Herzberg et al., 1959; Maslow, 2014).

Similar to their differing views of Herzberg's Two-Factor Theory, Locke et al. (1983) also states that Maslow (2014) has a weak structure due to very few studies supporting the concept of a fixed hierarchy of motives (Herzberg et al., 1959). Additionally, Locke et al. (1983) state there is no resemblance between needs and values presented in Maslow's theory. Rather than using the two previously discussed theories, Locke et al. (1983) appropriately based their research on the Job Characteristics Theory to determine how particular job characteristics affect job outcomes, including job satisfaction. This theory was not selected for the purposes of this research due to the focus on skill and tasks rather than overall job perceptions.

In a like manner, Transformative Learning Theory enabled the three researchers to dissect individual experiences faced by the new faculty as it molded their viewpoints of the world (Perry et al., 2019). Using this theory allowed researchers to use knowledge regarding the processes of learning to make their experiences meaningful in addition to how society impacted those experiences. The theoretical framework was described in detail providing a clear picture of Transformative Learning Theory. The theoretical lens used provided authors with the tools necessary for analyzing and interpreting their experiences as well as informing their methodological approach based on their own realizations of power. Although transitional experiences are of great value in this study,

Transformative Learning Theory is predominately used in qualitative research and is not appropriate due to the quantitative methodological approach and open-ended questions.

Reddy et al. (2016) used the Kolb Learning Cycle and adult learning theory to effectively train faculty members with four learning modules to support the growth of university educators. The use of the adult learning theory allowed Reddy et al. (2016) to conclude that, in addition to the modules, there is still a need for a balancing act including other aspects of preparation training such as mentoring and peer support groups.

Herzberg's Two-Factor Theory can be seen as a framework that addresses the challenge of providing sufficient resources from administration to create desirable working conditions so new higher education faculty members have feelings of job satisfaction as they experience a career transition (Herzberg et al., 1959). Feelings of preparedness are crucial to overall job satisfaction in both highest and lowest ranked non-traditional university positions (Martinez & Martinez, 2019). Because of this, the use of Herzberg's Two-Factor Theory is warranted to inform the work of determining the feelings of preparedness in new higher education faculty members. Herzberg's Two-Factor Theory will be used to guide discussions about individual studies presented in the following sections regarding faculty onboarding experiences and administrative roles in new faculty onboarding in higher education institutions (Herzberg et al., 1959).

New Higher Education Faculty Onboarding Experiences

The first pathway to be discussed in the review of literature is the onboarding and skill building experiences of new faculty members in higher education. Within the first subcategory of pedagogy in higher education are three studies supporting the overall problem. A variety of outcomes was noted due to varying methodological approaches and

geographical contexts. Silander and Stigmar (2019) and Bhutto et al. (2016) revealed that personal views of higher education teachers are used to shape ideas of teaching, therefore increasing the need for pedagogical training. Kaynardağ (2017) provided an essential large-scale study for pedagogy in higher education with results showing a significant difference between pedagogically trained teachers versus non-pedagogically trained teachers in the domains of delivery, communication, and assessment. Bringing a study of this caliber into higher education institutions within the United States where a great emphasis is placed on research rather than pedagogical preparation would be beneficial. Justification for using pedagogical studies rather than andragogical foundation is provided at the conclusion of the andragogy section.

The second subcategory within the first pathway is online instruction training in higher education. Affirmative online faculty training findings in higher education institutions in the United States were noted in the work of Brinkley-Etzkorn (2018) and Martin et al. (2020). A positive increase in 19 out of 20 of the criteria for pre-training and post-training syllabi development was noted (Brinkley-Etzkorn, 2018) as well as higher perception of importance of learning new technologies compared to those who had taught more than 15 years (Martin et al., 2020). While the demand for online instruction is continually increasing, further research is needed to determine effective methods of integrating pedagogy and technology as well as motivators for voluntary online teacher training (Brinkley-Etzkorn, 2018). The aforementioned research is clearly presented in the next two organized sections.

Pedagogy in Higher Education

While the traditional practice of preparing primary and secondary education teachers with foundational pedagogical knowledge is seen worldwide, higher education teachers often lack the tools necessary to foster adequate teaching outcomes due to their lack of pedagogy and andragogy training (Pew, 2007).

> Difficulty arises when pedagogical methods and practices are applied in whole or in part to situations that require andragogical dynamics. A misunderstanding or misapplication of these critical issues may result in situational, temporary, or unsustainable models of motivation that guide lifelong learners and perhaps undermine the entire process of student motivation. (Pew, 2007, p. 14)

Pew (2007) suggests that there is a delicate balance of skills needed to incorporate andragogy and pedagogy into the higher education classroom to promote motivation among students. Taking an evidence-based approach to teaching strategies is a beneficial way to promote quality teaching within universities across the nation (Jensen, 2011). By following andragogical teaching approaches, teachers can eliminate ineffective instructional methods and incorporate new and emerging trends into the classroom setting. Pedagogical training, even informal and minimal, can yield great benefits to the university (Jensen, 2011).

Few studies have examined the individual and organizational motives behind higher education teacher training as Silander and Stigmar (2019) have done. Individual motives are characterized as a means to change teaching practices, often on a voluntary basis (Silander & Stigmar, 2019). In contrast, organizational motives are grounded in quality, goals, and intuitional planning. Social context can be used as a way to determine

the motives behind faculty training. Ideologies of education were explored to help bridge the social context and motives for education. Using a stakeholder model of investigation through individual 45-minute interviews with 12 students and 12 teachers from four Swedish universities, Silander and Stigmar (2019) found that motives vary among those involved in higher education teacher training. Students, administration, and governmental aspects take an organizational approach, whereas teachers have more of a personal view influencing their desire to learn. Interestingly, faculty members were the only group of stakeholders who did not adopt a social efficiency outlook on education. The majority of teachers agreed that higher education teacher training in pedagogic skill building would be beneficial in their careers. In addition, it was found that higher education teacher training programs typically have a checklist mentality rather than strategic outline for appropriate educational development. All students interviewed supported the idea of higher education teacher training due to the overwhelming amount of changes in classroom facilitation and the fear of teaching approaches shifting towards traditions rather than scientific knowledge (Silander & Stigmar, 2019). One strength identified in this study is the different groups represented as well as the unique overall question of motives behind learning. This quality study gives meaningful application for the need of higher education teacher training due to differing classroom approaches that are not always accurately grounded in pedagogical or andragogical data (Silander & Stigmar, 2019).

As Silander and Stigmar (2019) emphasized, appropriate classroom teaching approaches are crucial to the quality of education offered in higher education (Bhutto et al., 2016). University administration can find it overwhelming to keep up with the rapid

evolvement of pedagogical and research agendas of faculty members. Bhutto et al. (2016) used student evaluations of teacher performance as well as self-evaluations completed by teachers to determine the effectiveness of teacher training in groups of both trained and untrained teachers. Results show that communication skills were positively affected by high self-perception of competence in the group of trained teachers. A significant difference was found between student and teacher perceptions of pedagogical skills. It is necessary to provide teacher training programs in higher education for the teachers to stay abreast of the latest pedagogical knowledge (Bhutto et al., 2016). Bhutto et al. (2016) highlights the challenge that higher education administrators commonly face of providing relevant andragogical training programs to their faculty. Perhaps another research angle for Bhutto et al. (2016) to approach could be from the administrative side providing adequate skill building resources to new faculty. While this study was lacking quality in identifying limitations and bias as well as giving recommendations for future research, it is important for the overall problem due to the fact that it supports the need for higher education teachers to be adequately equipped with pedagogical knowledge to shape their teaching styles (Bhutto et al., 2016).

Higher education teaching styles specifically under the domains of delivery, communication, and assessment are of utmost importance when determining the impact that teaching skills have on learning outcomes (Kaynardağ, 2017; Pew, 2007; Silander & Stigmar, 2019). Using quantitative data collected from 1083 study participants, Kaynardağ (2017) aimed to determine if there is a difference in student perceptions within these domains of pedagogically trained teachers versus non-pedagogically trained teachers at a private university in Turkey in this descriptive based study. Surveys were

administered to two groups of students who had no previous knowledge of the training background of teachers at the participating university. The data collection instrument was previously developed and required participants to rate items on a 9-point Likert scale. A sample of the survey instrument was provided in the article. Group one consisted of 650 students of teachers who had no pedagogical training, and group two consisted of 433 students of teachers who had previously received varying types of pedagogical training. A statistically significant difference between pedagogically trained teachers versus non-pedagogically trained teachers was found in all three domains (Kaynardağ, 2017). Remarkably, the most concrete gap between the ratings was noted in the communication domain, specifically their level of sensitivity to student involvement. Teachers with pedagogical training were perceived to be more respectful and patient to students making the opportunity to acquire new knowledge more welcoming. Kaynardağ (2017) concludes that all higher education institutions should incorporate pedagogical training into their new faculty orientation agendas to improve the overall quality of education provided. Bringing a study of this caliber into higher education institutions within the United States where a great emphasis is placed on research rather than pedagogical preparation would be beneficial. This quality study is valuable to the overall problem as it supports the need for pedagogically trained higher education teachers from both an institutional need and the perceptions of students (Kaynardağ, 2017).

While pedagogy training is commonly used for optimum practices in higher education, some may argue that andragogy training is more applicable due to the age of the target audience in that setting (Taylor & Kroth, 2009). The impediment of researchers

using andragogy more frequently is the lack of fundamental scientific characteristics and measurable tools (Taylor & Kroth, 2009).

Unlike pedagogy, which has historically been used for thousands of years, andragogy is a term that has roots in the early 1800's when Alexander Knapp depicted Plato's instructional practices with adults (Taylor & Kroth, 2009). While andragogy is typically referred to as learner-based education, Knowles (1984) determined five key characteristics of adult learners that helped mold initial andragogical approaches in educational settings: self-concept, experience, readiness to learn, orientation to learning, and motivation to learn (Blackley & Sheffield, 2015). Similarly, Grigg and Lewis (2018) state that, "One of the principles of andragogy is that as people mature they become more self-directed and tend to be less subject-centered and more problem-centered in their approach" (p. 9). A problem-centered approach is commonly used in undergraduate classrooms as students prepare to become practitioners with the use of case studies. It is suggested that students on the cusp of adulthood, such as those who have just completed secondary education and are in their first year of higher education, could benefit from digital andragogy approaches due to rapid technological advances (Grigg & Lewis, 2018). Due to the lack of measurable tools and scientific foundational knowledge, there is little research available surrounding andragogy training in higher education. With proper foundational training, higher education faculty members can be equipped to teach using multiple platforms including the increasing need for digital technology instruction (Grigg & Lewis, 2018; Pitts & Christenbery, 2019).

Online Instruction Training

Technology advancement over the years has made online learning possible, allowing students to participate and actively engage in class discussion with remote access to course material (Pitts & Christenbery, 2019). Allied health fields in particular have taken advantage of online instruction and are now able to offer entire virtual programs. Experts in healthcare are finding that the transition into academia as a new teacher for these online programs can be quite challenging (Pitts & Christenbery, 2019). Due to the recent COVID-19 pandemic, higher education institutions nation-wide have been forced to expand on their knowledge and skills to transition to online distance learning (Roache et al., 2020).

Roache et al. (2020) identified key concepts that provided a seamless transition to online learning platforms during the COVID-19 pandemic. The first organizational requirement for a successful transition is skilled leadership within higher education institutions. It is recommended that skilled leaders implement services to assist faculty members during the virtual transitional phases. Concepts such as online course design and implementation are areas in which even seasoned teachers may not have any experience. Additionally, student support services and engagement measures should be present as they learn to navigate online learning systems (Roache et al., 2020).

Students often are able to find their voice using social media platforms, and some of their heightened sense of security behind a screen has been found to cause incivility in online classroom settings (Campbell et al., 2020). These disruptions can impede learning outcomes and be detrimental for both students and faculty. As online educational services continue to increase, faculty need to be aware of the potential barriers to conducting civil

online classrooms. Some commonly seen inappropriate acts by adult learners in online learning situations include making offensive comments in a discussion forum, failure to respond, cyberbullying, academic misconduct such as cheating on graded materials, and texting/emailing/chatting during synchronous presentations. It is suggested for teachers to be upfront about their online behavioral expectations. Additionally, teachers should offer empathy to students during interactions online to provide a more effective teaching environment. Having cordial and timely written feedback as well as active listening can be helpful for the overall classroom morale (Campbell et al., 2020). It is also important to remember that these adult learners are often times highly skilled and successful students which can be hard to identify behind a computer screen, especially for novice higher education teachers that may be transitioning from the healthcare field (Pitts & Christenbery, 2019).

Pitts and Christenbery (2019) aimed to establish successful ways to transition field experts into the online faculty role of a nurse practitioner (NP) program. Healthcare organizations are dependent upon pedagogical background of nurse educators to train the next generation of nurses. Programs are moving towards online instruction for a number of reasons, one being able to use human resources at their greatest capacity. Due to minimal limitations on geography, employment, and family obligations, significant growth has been seen in programs with the establishment of online learning. One common hesitation that teachers have about online learning is the lack of personal relationships developed through a screen as opposed to sitting in a classroom. The practice paper revealed that “limited preparation to online education environments jeopardizes the recruitment and retention of qualified NP faculty” (Pitts & Christenbery,

2019, p. 29). Potential instructors should ask specific questions of administrators during their pre-employment period to determine if they possess the qualities of an effective online higher education teacher. It is recommended that questions include topics such as faculty training, performance evaluations, scholarly teaching, service, scholarship, compensations, and educational requirements. Colleagues and mentors have a pivotal role in providing new teachers with the resources and training to ensure online teaching excellence (Pitts & Christenbery, 2019).

The first empirical research article presented under the online instruction category illuminates the work of Brinkley-Etzkorn (2018) as it aligns with the positions of previously mentioned academic scholars regarding higher education online instruction training (Campbell et al., 2020; Pitts & Christenbery, 2019). Using the Technological Pedagogical Content Knowledge model as the conceptual framework, Brinkley-Etzkorn (2018) examined the influence of training new online faculty members at a large southeastern university in the United States in this quantitatively driven mixed methods study. Training for online instruction occurred every summer for approximately three weeks from 2011 to 2014 and was made possible by collaborations with campus technology centers. The specific pre/post training course data sources utilized were course syllabi preparation, student evaluations of teaching scores, and a follow-up online survey. Instructors who showed interest in reorganizing their face-to-face classes into an online, hybrid, or flipped format were able to participate in the training and could receive a $2,500 stipend upon completion of all requirements. A total of 92 instructors participated in the program, and of those, 28 met the requirements of the study. Syllabi were evaluated pre-and post-training to determine if changes were made reflective of the

content presented in the training. A positive increase in 19 out of 20 of the criteria for pre- and post-syllabi development was noted. While instructors' thoughts regarding teaching approaches were positively influenced by the training, it remains unknown if actual teaching effectiveness was impacted. It was concluded that complete synthesis of pedagogy and online instruction is challenging due to the differing levels of ability in each (Brinkley-Etzkorn, 2018). The work and research presentation of Brinkley-Etzkorn (2018) brings quality to this study because of the geographical setting in southeastern United States. Additionally, as the increased need for online instruction in higher education is continually emerging, the research of Brinkley-Etzkorn (2018) supports the overall problem at hand in this study. Further research is needed to determine effective methods of integrating pedagogy and technology as well as motivators for voluntary online teacher training (Brinkley-Etzkorn, 2018).

While there is great benefit in higher education online teacher training (Brinkley-Etzkorn, 2018), Martin et al. (2020) argues that prior to training, a series of events must occur to determine the overall status of the institutional digital technologies. Using data from perceived faculty importance and competence in teaching can then inform the training methods (Martin et al., 2020). Martin et al. (2020) explored higher education faculty technology use by expanding on three main technological components: importance, competence, and motivation. Institutional administrators should be responsible for examining their current state of technology use by faculty and identify their needs based on that assessment. This study aimed to determine what technologies faculty considered important, what their perceived competence levels were in those technologies, as well as participant motivational and demographic factors. A survey was

distributed to three major educational organizations in the United States, and Martin et al. (2020) had a total of 247 respondents. Results indicated that faculty who taught graduate students had a higher belief of importance of collaboration tools in comparison to those who only taught undergraduate courses. Assistant professors and part-time lecturers had higher belief of their technological competence compared to full rank professors. This can be due to the amount of time that full rank professors spend on research as opposed to learning new instructional technologies. Lastly, faculty who had taught 6 to 15 years had higher perception of importance of learning new technologies compared to those who had taught more than 15 years. There is an additional suggestion for further research to explore how social media can be used in online teaching (Martin et al., 2020). Martin et al. (2020) recommended that, after determining institutional status on digital technology instruction, administrators should provide proper training and support for faculty to be fully competent in online teaching.

In summary, it is well supported in the literature that pedagogical preparation and online training are instrumental in effectively preparing both new and veteran faculty in higher education (Bhutto et al., 2016; Brinkley-Etzkorn, 2018; Silander & Stigmar, 2019). While the traditional practice of preparing primary and secondary education teachers with foundational pedagogical knowledge is seen worldwide, higher education teachers often lack the tools necessary to foster adequate teaching outcomes due to their lack of pedagogy and andragogy training (Pew, 2007). There is a need for additional research to determine the use of social media in online instruction and to identify effective methods of integrating pedagogy into technology (Brinkley-Etzkorn, 2018; Martin et al., 2020). Instead of being eliminated from the training due to lack of

motivation, Herzberg et al. (1959) supports the use of motivators for growth intrinsic to the job. Using Herzberg's Two-Factor Theory to guide approaches as previously mentioned is an appropriate method that will also be explored in administrative roles bringing new faculty into higher education.

Administrative Role in New Faculty Onboarding

The second pathway to be discussed in the review of literature is the administrative role in new faculty onboarding. The first subcategory is administrative challenges in leading new faculty and includes two influential studies supporting the overall problem (Kilbourne et al., 2018; Perry et al., 2019). With the use of autoethnography, three colleagues were able to document their own challenges and circumstances during their time of transition into academics (Perry et al., 2019). One similar challenge noted among the three scenarios was the workplace socialization process while establishing individual identities. Additional obstacles identified include gender, race, and age. Perry et al. (2019) suggests that administrative support strategies should be considered for individuals transitioning to faculty roles within higher education. The second study within this section is that of Kilbourne et al. (2018) who used a phenomenological approach to understand the perceptions and life experiences of faculty members new in academia and how those perceptions connect with the administrative role of developing quality teachers. Results indicate that high personal standards must be present for faculty success as opposed to working exclusively for institutional goals (Kilbourne et al., 2018). Additionally, student evaluation of teacher performance at the conclusion of courses is a common procedure in university settings, but the extent to which higher education teachers use the data collected is another

challenge administrators often face (Smith, 2008). To better focus the evaluation efforts of administrators, Smith (2008) recommends an approach that engages faculty with each aspect of evaluation and improvement activities.

The second subcategory within the second pathway is transitional support provided through administration. Common areas of beneficial administrative support in faculty onboarding processes include induction programs, professional development opportunities, and instructional designer partnerships (Persellin & Goodrick, 2010; Reddy et al., 2016; Richardson et al., 2018). In a case study approach, Reddy et al. (2016) examined an established induction program for university educators in South Africa to determine how individual values and knowledge of teaching influenced classroom outcomes. The learning modules were found to be effective means of training faculty members using the Kolb Learning Cycle and adult learning theory. It was concluded that, secondary to the modules, there is still a need for a balancing act including other aspects of preparation training such as administrative mentoring and peer support groups (Reddy et al., 2016). The second article within this second subcategory supports the ongoing need for professional development workshops to enhance the teaching effectiveness of faculty members (Persellin & Goodrick, 2010). In an additional study supporting the need for administrative assistance in onboarding, Richardson et al. (2018) aimed to determine what appropriate collaborations should look like between instructional designers and faculty and to identify essential strategies needed to create successful partnerships between faculty and instructional designers. Administration should be included in the instructional designer recruitment process for a more thorough understanding of the internal processes. Informing both parties' expectations of work responsibilities, mutual

respect, understanding, and cultural differences will aid in the adaptation of developing partnerships (Richardson et al., 2018). Lastly, one common finding among researchers is the overwhelming benefit of peer mentorship provided through administrative support (Carr et al., 2015; DeCino & Strear, 2019; Eret et al., 2018).

Administrative Challenges in Leading New Faculty

Administrators in higher education are increasingly challenged to develop effective ways of supporting new faculty (Koch, 2008). Coaching can be an efficient way to meet individual needs of new faculty in organizations that have a supportive culture (Cox, 2012). Investing in the professional development of new faculty by supporting their needs and concerns can provide enhanced learning experiences for students (Cox, 2012; Koch, 2008). Limited research is available that provides insight into the establishment processes of new faculty in higher education (Vatanartıran, 2013). It is suggested that higher education management through the institutional supportive mechanisms and administrative participatory leadership styles are important factors during the establishment of new faculty (Vatanartıran, 2013).

Gender and age play an important role in the establishment and support of new faculty members in higher education (Ali & Prasad, 2019; Tessens et al., 2011). The findings of Ali and Prasad (2019) revealed age discrimination to be more prevalent in women faculty. Additionally, it was determined that males have higher appointment rankings (Ali & Prasad, 2019). Tessens et al. (2011) suggested that males have more support in their career advancement in higher education, while women are expected to take on multiple basic roles causing feelings of stress and burnout. Administration needs

to focus on providing greater opportunity for women due to evidence that male colleagues receive more support, resources, and recognition (Tessens et al., 2011).

Multiple factors can contribute to a challenging period of transition for professional career shifts from practitioner to faculty (Perry et al., 2019). Working in higher education does not always foster opportunities for professional growth, especially when instructors become isolated within their individual concentrations. It is imperative that support and resources are available for faculty to remain professionally engaged and influential. With the use of autoethnography, three colleagues were able to document their own challenges and circumstances during their time of transition into academics (Perry et al., 2019). The purpose of this study was clearly stated as it emerged from a casual conversation regarding transitioning into academia in hopes to spark greater conversations surrounding faculty needs. The rationale for the study is supported by the need for additional faculty support during the transitional periods. Built-in support systems and proven developmental strategies are crucial to the transition and retention of tenure-track faculty as noted in this intrinsic, emic study (Perry et al., 2019).

Transformative Learning Theory enabled the three researches to dissect individual experiences faced by the new faculty as it molded their viewpoints of the world (Perry et al., 2019). Using this theory allows researchers to use knowledge regarding the processes of learning to make their experiences meaningful in addition to how society impacted those experiences. The theoretical framework was described in detail providing a clear picture of Transformative Learning Theory. The theoretical lens used provided authors with the tools necessary for analyzing and interpreting their experiences as well as informing their methodological approach based on their own realizations of power.

Although transitional experiences are of great value in this study, the use of Transformative Learning Theory is predominately used in qualitative research and is not appropriate due to the quantitative methodological approach and open-ended questions (Perry et al., 2019).

This qualitative exploration utilized autoethnography to connect personal experiences to the real-world challenges higher education faculty members face in career transitional periods (Perry et al., 2019). The use of the iterative process in this autoethnography combined with Transformative Learning allowed authors to provide well defined roles for each researcher and provide unique insight into the situational differences experienced without forcing ideas upon readers. Limitations were not discussed, although implications for additional research was presented. Perhaps the limitations of the study design were not included due to the small number and feasibility of the working relationship already established (Perry et al., 2019).

Patterns were explored and coded for emerging themes across all experiences. Results were extrapolated to compare and contrast against previous literature surrounding similar scenarios (Perry et al., 2019). Although the coding process was not clearly outlined step by step, it is not difficult to see how information was identified. Each of the three participants clearly described their context and personal situations. A useful graphic was provided that illuminated the triangulation between the three. Ethics was briefly discussed, but the authors did not provide information regarding ethics and validity for the overall study due to the autoethnographic structure (Perry et al., 2019).

Perspectives provided from three different authors allow an in-depth review of the unique circumstances involved (Perry et al., 2019). Each author provided detailed and

differing personal and professional experiences in terms of context, relationship, and setting realms. Quotes were provided from some student evaluations that allowed insight into what exactly was felt in that setting. Beliefs were inserted into the article as it related to the way the individuals felt and perceived comments and actions from others. There are no graphs depicting results other than the one figure previously mentioned showing similarities between the three authors. Authors suggest that administrative support strategies should be considered for individuals transitioning to faculty roles within higher education (Perry et al., 2019).

Authors concluded that higher education institutions should have the goal of fostering a safe place for professionals to have intentional conversations surrounding these issues (Perry et al., 2019). This implication is consistent with the findings. Limitations were not discussed throughout the article, presumably due to the small number and feasibility of the working relationship already established among researchers. The article provides encouragement for higher education administration to truly investigate problematic areas within their departments and address it through thorough evaluation and conversation (Perry et al., 2019). This suggestion from the researchers connects directly with the theoretical framework used to structure this explorative study. Study implications are of great significance as transitions regularly occur in the workplace and social realms. One important piece of information to note is that these researchers had the support of each other during the research process (Perry et al., 2019).

Kilbourne et al. (2018) aimed to understand the perceptions and life experiences of faculty members new in academia and how those perceptions connect with the administrative role of developing quality teachers. A purposive sampling technique was

used to identity participants in the phenomenological study, which included 16 junior faculty, all of whom had been employed at least 1 year but no longer than 3 years in their new faculty positions (Kilbourne et al., 2018). A social constructivism interpretive paradigm was used to inform the methodology. The semi-structured phone interviews lasted from 35 to 60 minutes and were conducted with open-ended questions and audio recorded. Examples of questions were provided in the article. All authors were included in the study design to reduce bias potential and to accurately reflect the purpose of the study. Each researcher read transcripts after interviews were complete to provide a thorough understanding followed by labeling and coding of themes (Kilbourne et al., 2018). Participants were asked to reflect on three primary areas that enhance their development as faculty members. Those areas included and clinical education experiences, experiences prior to doctoral education such as adjunct roles, and doctoral educational experiences. Three behavioral themes emerged as part of the transition process including "adaptive perfectionism, competence gained through experience, and the use of mentor support provided by a mentor network" (Kilbourne et al., 2018, p. 351). Direct participant quotes were provided in the article as examples under each behavioral theme. Results indicate that high personal standards must be present for faculty success as opposed to working exclusively for institutional goals. Even though faculty members have extensive clinical and educational backgrounds, their identities are still in the formative stages as new faculty members. Based on findings, it is recommended that doctoral students as well as new faculty follow some guidelines including the regular use of self-reflection as an avenue of professional growth, evaluation of personal standards, initiation and maintenance of workplace relationships and mentors, and finally taking

ownership in the professional development process (Kilbourne et al., 2018). Additionally, Kilbourne et al. (2018) suggests that new faculty members utilize mentorship as a means to gain support during their career transition into higher education. This well-written quality article was clearly organized and presented supportive information to the overall problem (Kilbourne et al., 2018). Recommendations for additional research include using a diverse population from varied backgrounds as well as including various types of higher education institutions to determine other challenges faced from administrators in the onboarding process (Kilbourne et al., 2018).

Quality management is a common challenge among higher education administration and has the potential to be viewed as controlling rather than the original intent of seeking improvement. Researchers aimed to determine faculty perceptions among varying departments and aspects of quality management in the Netherlands higher education system (Kleijnen et al., 2011). A 16-item questionnaire distributed over a six-month period was used as the primary research tool. Data from 266 participants were analyzed to demonstrate that, overall, faculty members believe quality management can indeed generate improvement within universities. It was also reported that faculty perceptions vary greatly between departments, causing researchers to conclude that communication regarding quality control measures should take precedence in all departments to create a culture accepting of change and improvement (Kleijnen et al., 2011).

Student evaluation of teacher performance at the conclusion of courses is a common procedure in university settings, but the extent to which higher education teachers use the data collected is another challenge administrators often face (Smith,

2008). To better focus the evaluation efforts of administrators, Smith (2008) recommends an approach that engages faculty with each aspect of evaluation and improvement activities. Within in the proposed model of evaluation are four different sources of information regarding teaching including self- reflection, student learning, peer review, and student experience. This method allows teachers to take a systematic view regarding their own teaching outcomes and ultimately enriching the comprehension of teaching experiences (Smith, 2008).

Transitional Support Provided through Administration

Trust et al. (2017) examined professional learning networks on teaching and learning outcomes. Trust et al. (2017) provided the following definition: "A Professional Learning Network (PLN) is a system of interpersonal connections, tools, and resources that support informal learning related to a profession" (Trust et al., 2017, p. 1). Looking specifically at common avenues of higher education collaboration, social media yields few barriers to participation (Trust et al., 2017). Subgroups can be formed based on an infinite number of commonalities including research interests, leadership roles, cultural considerations, and the like. However, the rapid evolvement of technology groups can hinder the ability of professionals to fully comprehend concepts before moving on to the next topic. Another concern of professional development using social media is words being taken out of context. This can be used against scholars in an attempt to cast negative attention on the person who originated the comment. Regardless, online groups are of great benefit to professional development in higher education and can create learning platforms that otherwise would not be possible through a simple one-day orientation induction program (Trust et al., 2017).

Reddy et al. (2016) studied an established induction program for university educators in South Africa to determine how individual values and knowledge of teaching influenced classroom outcomes. The program was mandatory with the exception of accomplished teachers who have received distinguished awards and those who had previously completed similar training courses. Program design was intended to support the growth, both personally and professionally, of university educators with the application of four learning modules. Using a case study qualitative approach, Reddy et al. (2016) explored participant understandings of the need for continuous administrative support. Data used were from course documentation and templates, reflective writing, and activities and assessments for each model. The learning modules were found to be effective means of training faculty members using the Kolb Learning Cycle and adult learning theory. It was concluded that, in addition to the modules, there is still a need for a balancing act including other aspects of preparation training such as administrative mentoring and peer support groups (Reddy et al., 2016). Additional research in the area of peer engagement and interdisciplinary networking as it relates to new faculty and teaching preparedness (Reddy et al., 2016).

The need for professional development is well established, but to what facets of academia should it be applied? The effectiveness of professional development during the transition from career to academia is an area that Behari-Leak (2017) investigated. Behari-Leak's (2017) research supports the practice of providing newcomers a program for classroom preparation; but doing so must also emphasize the importance of social realm contexts. It would behoove universities to initiate programs that actively engage new faculty with real-life situations. By simply introducing surface level pedagogical

practices, it is believed that teachers are not fully equipped for inclusivity in higher education (Behari-Leak, 2017).

Subject matter knowledge is an obvious necessity for effective teaching (Persellin & Goodrick, 2010). Beyond that, higher education has historically lacked methods of equipping teachers for success in the classroom teaching (Persellin & Goodrick, 2010). The Associated Colleges of the South (ACS), a group of 16 southern liberal arts universities, has recognized this need and provided microteaching workshops for faculty with the purpose of professional development. The microteaching workshops allow teachers from varying disciplines to plan a lesson then view video footage of that lesson being taught and ultimately learn from group discussion of pedagogical issues (Persellin & Goodrick, 2010). Persellin and Goodrick (2010) used a sample of 206 teachers who participated in the professional development microteaching workshops from 1992 to 2007 to determine workshop perceptions as well as any teaching changes made as a result of the workshop. The survey revealed that 91% of the participants tried a new technique in the classroom based on concepts from the workshop and 89% have become more confident teachers. A small number of participants did not think the workshop was a valuable use of time. Feedback from those participants stated that the setting was intimidating since it involved receiving constructive criticism from other professionals and they needed more time during the summer to do research instead of professional development. Researchers concluded that, despite the few limitations of the study, other institutions should consider the use of professional development workshops to enhance the teaching effectiveness and confidence of faculty members (Persellin & Goodrick, 2010).

In contrast to skill building within professional development teacher workshops, some university instructors rely on the use of instructions designers to design their courses (Richardson et al., 2018). Instructional designers are experts in their field and play a critical role in higher education coursework development. University instructors utilize evolving methods of teaching by shifting classroom experiences towards learner-centered education with the use of media and new technology (Richardson et al., 2018). Because of this, there is an increased need for partnership between faculty and instructional designers. While the job demand for instructional designers is projected to increase in the coming years due to the growth of online instruction in university settings, there is still an overwhelming lack of knowledge regarding strategies of effective collaboration with university faculty (Richardson et al., 2018).

In this second research article analyzed within this subcategory, Richardson et al. (2018) provided adequate introductory information in support of the study rationale. The purpose of this study was clearly stated with two main themes guiding the research: to determine what appropriate collaborations should look like between instructional designers and faculty and to determine essential strategies needed to create successful partnerships between faculty and instructional designers (Richardson et al., 2018). The typical roles of higher education faculty and instruction designers were clearly outlined in the introduction. Additionally, Richardson et al. (2018) reviewed studies that focused on collaboration between faculty and instructional designers which confirmed that there is indeed a benefit in a partnership between the two. Phenomenological techniques were used to answer the research questions, and the literature review provided by Richardson et al. (2018) encompasses research relevant to the focus of the study. An analysis of gaps

in the literature was provided to further emphasize the need for this study (Richardson et al., 2018). While adequate background definitions are provided, there appears to be a lack of design overview within the introduction due to Richardson et al. (2018) reserving that information for the methodology section.

A total of 15 research participants were given pre-interview surveys and semi-structured interviews at a large midwestern R1 university with minimal description provided (Richardson et al., 2018). Participants included 10 instructional designers who had direct experience working with faculty, and five faculty members who had experience working with instructional designers. Detailed job descriptions of participants were not given due to blinding. Small sample size and the use of only one university were noted as methodological design limitations of the study (Richardson et al., 2018).

Multiple strategies were implemented to ensure that information was kept confidential and the data collection was accurate (Richardson et al., 2018). The use and description of iterative process was accurately detailed. All participants had two semi-structured interviews that lasted approximately 60 minutes each. Interview questions were similar for both groups and designed to withdraw experiential information as well as personal interpretations that would build on the knowledge of collaboration. Codebooks were developed for consistent record keeping and data extraction. Each research member had specific duties that were clearly defined, particularly for the intent of bias avoidance (Richardson et al., 2018).

To account for personal biases, Richardson et al. (2018) used bracketing at the individual level prior to sharing as information as a group. Additionally, researchers had no prior contact with participants (Richardson et al., 2018). Four major themes emerged

from the data and were well documented with individual participant statements included from each group. A theme of cohesiveness illuminated the positive benefits of collaboration between faculty and instructional designers. Richardson et al. (2018) found that many faculty members do not realize there are instructional design services available and those that do utilize the services are doing so for course redesign. Themes two and three are centered around the structure, supports, and barriers of the collaborative relationships. The final theme offered strategies for a successful collaboration between instructional designers and faculty (Richardson et al., 2018).

Richardson et al. (2018) reiterated that collaborations between instructional designers and faculty are necessary for quality learning experiences in higher education. Consistent with research findings, it was concluded that a clear understanding of roles is key to a successful partnership (Richardson et al., 2018). Administration should be included in the instructional designer recruitment process for a more thorough understanding of the internal processes. Informing both parties expectations of work responsibilities, mutual respect, understanding, and cultural differences will aid in the adaptation of developing partnerships (Richardson et al., 2018).

Study limitations were discussed at length and revealed that different types of university settings may not produce findings consistent with Richardson et al. (2018). Richardson et al. (2018) recommends future research that could determine soft skills needed from the faculty perspective so instructional designer training programs can include that in their curriculum. Additionally, the study only included participants experienced in working with the opposing discipline, so the application of the recommendations would be somewhat skewed if previous collaboration had not occurred.

Lastly, it was recommended for administration to be included in the process of collaboration, but detailed information was not given as to what extent administrators should be involved (Richardson et al., 2018). When skill building and course design concepts become integrated into the workforce, having a peer mentor is critical for professional gain (Eret, et al., 2018).

Mentorship is a professional development method that is helpful not only with experienced teachers changing universities but also with career transitions into academia (Bowman et al., 2018). Mentorship is a concept that dates back to ancient times. Through mentoring, professional relationships must be built to develop skills, offer support, and provide encouragement (Bowman et al., 2018). Bowman et al. (2018) studied mentoring and orientation tactics for successful transition into academia to determine the exact role employers should take in the process. Bowman et al. (2018) also gave specific institutional recommendations for administrators guiding new faculty through the orientation process. In order for higher education institutions to adequately equip new employees for teaching success, employers must provide effective and specific faculty orientations and evaluations, offer continual learning workshops throughout the initial year of teaching, and be forthcoming with all faculty expectations. In addition, intentional mentorship should be offered as a means of support for new faculty (Bowman et al., 2018). Not only is the mentee receiving professional gain, but the mentor and the organization will reap the benefits of mentorship as well (Eret, et al., 2018).

Eret et al. (2018) interviewed participants of a mentoring program abroad. The qualitative data reveled that a peer mentoring program provided contributions to their professional development and career as a whole (Eret et al., 2018). Another group of

researchers studied higher education faculty relationships in the midwest and western regions of the United States, specifically looking at the use of duoethnography in mentoring (DeCino & Strear, 2019). Duoethnograpy allows the mentorships participants to give feedback based on their own individual ideas and beliefs. Yielding similar results as Eret et al. (2018), DeCino and Strear (2019) found that the use of duoethnograpy is beneficial for peer mentorship as participants establish their foundations as educators.

Self-mentoring is another type of proactive professional development that has been deemed appropriate (Carr et al., 2015). Self-mentoring can include "resource finding strategies, self-tutoring strategies, listening and clarifying, reading and researching and observing people" (Carr et al., 2015, p. 4). A case study method was used for this study held at an American southeastern university. Carr et al. (2015) aimed to determine how self-mentoring techniques aid new faculty members as they transition into their roles and individual settings. Each participant paved his/her own path for success during the self-mentoring program, but the end result of professional growth and success was the same. Confidence was noted as the highest benefit throughout their self-mentoring journeys (Carr et al., 2015). In a similar study exploring self-confidence of new higher education teachers, Sadler (2013) found that content knowledge and teaching skills were related to feelings of self-confidence, with experience being a key factor in their overall perception.

In summary, it is well supported in the literature that, although there is a need for administrative support during new faculty onboarding procedures, there are common obstacles that prevent appropriate resources from being offered in higher education (Kilbourne et al., 2018; Kleijnen et al., 2011; Perry et al., 2019). Perry et al. (2019)

identified one common challenge as the workplace socialization process while establishing individual identities. Additional obstacles noted were gender, race, and age. Perry et al. (2019) suggest that administrative support strategies should be considered for individuals transitioning to faculty roles and that higher education institutions should have the goal of fostering a safe place for professionals to have intentional conversations surrounding these issues.

One important generalization that can be made from the research is that mentorship, whether through peers or self-driven, is imperative to the success of new faculty members in higher education (Carr et al., 2015; DeCino & Strear, 2019; Eret et al., 2018). There is a need for additional research to determine onboarding experiences when faculty members are coming from different backgrounds as well as when they are present in non-traditional higher education settings (Kilbourne et al., 2018). Additionally, research is needed in the area of peer engagement and interdisciplinary networking as it relates to new faculty and teaching preparedness (Reddy et al., 2016). Lastly, a supplementary research focus could be addressed to determine appropriate steps when faculty members are not fully committed to mentorship and collaboration (Richardson et al., 2018).

The theoretical framework used by Perry et al. (2019) was described in detail providing a clear picture of Transformative Learning Theory. The theoretical lens used provided Perry et al. (2019) the tools necessary for analyzing and interpreting their experiences as well as informing their methodological approach based on their own realizations of power. Although transitional experiences are of great value in this study, the use of Transformative Learning Theory is predominately used in qualitative research

and is not appropriate due to the quantitative methodological approach and open-ended questions.

Reddy et al. (2016) used the Kolb Learning Cycle and adult learning theory to effectively train faculty members with four learning modules to support the growth of university educators. The use of the adult learning theory allowed Reddy et al. (2016) to conclude that, in addition to the modules, there is still a need for a balancing act including other aspects of preparation training such as mentoring and peer support groups. While this theory was applicable for Reddy et al. (2016), this study is not using a training technique as part of its methodological design. Additionally, this study is not primarily focused on learning styles, rather, it is a subcategory of importance. The research presented in the review of literature fully supports the use of Herzberg's Two-Factor Theory as a theoretical framework to guide the efforts of the overall problematic onboarding procedures for new faculty in higher education.

Conclusion

It is a common practice for new university faculty members to be recruited from their areas of expertise as clinicians and practitioners (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Transitioning from a chosen field into a novice teacher can carry varying weights depending on university teaching appointments. Having the qualities of an experienced practitioner is highly desired to fill faculty roles, but the expertise as a practitioner does not necessarily develop the teaching skills. Due to the frequent hiring of faculty with limited andragogy training, university learning outcomes can be jeopardized, and the quality of the university could suffer as a result of the lack of foundational educational knowledge teachers need to successfully possess the

skill sets required in the higher education classroom setting (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016).

The key areas of empirical research presented above are categorized into three main sections with subcategories for greater organization and understanding. The first main pathway is Herzberg's Two-Factor Theory theoretical framework with subcategories of relevance to the problem and a review of Maslow's Hierarchy of Needs and motivational factors as well as other theories commonly use in this type of research (Herzberg et al., 1959; Maslow, 2014). The second pathway is new higher education faculty onboarding experiences and skill development with subcategories of pedagogy in higher education and online instructional methods as technology advances. The final pathway is the administrative role in new faculty onboarding processes with subcategories of common administrative challenges faced when onboarding new faculty and transitional support provided through administration.

Faculty onboarding processes in institutional settings are not always clear, partially because each member of the faculty selection committee can potentially have differing views of candidates (Tomlinson & Freeman, 2017). Applicants are often unaware of the methods of selection, which leaves them with a vague perspective of desired qualifications (Tomlinson & Freeman, 2017). Freeman and DiRamio (2016) found that elite universities often seek candidates who are products of elite universities with the hope that they gained academic preparation by default from the superior leadership within their institution. In addition, it was found that candidates who have diverse backgrounds are desired due to their potential benefits of creating an appropriate culture needed to meet the needs of all students (Freeman & DiRamio, 2016). While

graduates of non-ranked programs are capable of being quality faculty members, they are often overlooked in the selection process. They have the ability to bring unique perspectives into the workplace such as common problems experienced in non-ranked universities (Freeman & DiRamio, 2016).

Difficulty arose in finding quality articles that studied the onboarding experiences of new faculty who once were practitioners in areas other than the medical field. There is a need for additional research to determine onboarding experiences when faculty members come from different backgrounds as well as when they are present in non-traditional higher education settings (Kilbourne et al., 2018). Additionally, research is needed in the area of peer engagement and interdisciplinary networking as it relates to new faculty and teaching preparedness (Reddy et al., 2016). Lastly, a supplementary research focus could be addressed to determine appropriate steps when faculty members are not fully committed to mentorship and collaboration (Richardson et al., 2018).

Several areas within the literature are well supported. The first generalization to be made is that, although there is a need for administrative support during new faculty onboarding procedures, there are common obstacles that prevent appropriate resources from being offered in higher education (Kilbourne et al., 2018; Kleijnen et al., 2011; Perry et al., 2019). Perry et al. (2019) identified one common challenge as the workplace socialization process while establishing individual identities. Additional obstacles noted were gender, race, and age. Perry et al. (2019) suggests that administrative support strategies should be considered for individuals transitioning to faculty roles and that higher education institutions should have the goal of fostering a safe place for professionals to have intentional conversations surrounding these issues. A second

important generalization that can be made from the research is that mentorship, whether through peers or self-driven, is imperative to the success of new faculty members in higher education (Carr et al., 2015; DeCino & Strear, 2019; Eret et al., 2018). Lastly, an additional focus fully supported in the literature shows that pedagogical preparation and online training are instrumental in effectively preparing both new and veteran faculty in higher education (Bhutto et al., 2016; Brinkley-Etzkorn, 2018; Silander & Stigmar, 2019). While the traditional practice of preparing primary and secondary education teachers with foundational pedagogical knowledge is seen worldwide, higher education teachers often lack the tools necessary to foster adequate teaching outcomes due to their lack of pedagogy and andragogy training (Pew, 2007).

Martin et al. (2020) is correct that a pre-training evaluation is needed to determine overall perceptions of online teaching, but it seems questionable to fully rely on those data to determine who should partake in the training. For example, if employees do not feel motivated to participate in training courses, they would not rank the importance of online teaching as high. However, their low perception of importance should not determine their need to be trained properly in online instruction. Rather than utilizing the adapted readiness framework, Martin et al. (2020) could use Herzberg's Two-Factor Theory to guide his research as done in this study (Herzberg et al., 1959). Instead of being eliminated from the training due to lack of motivation, Herzberg et al. (1959) supports the use of motivators for growth intrinsic to the job. The research presented in the review of literature fully supports the use of Herzberg's Two-Factor Theory as a theoretical framework to guide the efforts of the overall problematic onboarding procedures for new faculty in higher education (Herzberg et al., 1959).

CHAPTER 3

METHODOLOGY

This quantitative study determined factors affecting preparedness for higher education teachers who were transitioned from their expert-level fieldwork into academia. It is a common practice for new university faculty members to be recruited from their areas of expertise as clinicians and practitioners (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Transitioning from a chosen field into a novice teacher can carry varying weights depending on university teaching appointments. Having the qualities of an experienced practitioner is highly desired to fill faculty roles, but the expertise as a practitioner does not necessarily develop teaching skills (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Due to the frequent hiring of faculty with limited andragogy training, university learning outcomes can be jeopardized, and the quality of the university could suffer as a result of the lack of foundational educational knowledge teachers need to successfully possess the skill sets required in the higher education classroom setting (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). This study was completed in multiple stages; the initial stage was the Delphi process in which a questionnaire was developed and used in the second stage. The second stage is where the developed questionnaire was used to evaluate the research question presented in the next section.

Research Question

The following research question was used to inform this study:

RQ1: What factors affect new faculty members' feelings of preparedness of teaching in higher education?

H_o: Faculty members' feelings of preparedness of teaching in higher education are not affected by any factors.

Population

The population generalized in this study included all full-time university instructors who have held teaching positions in higher education for five years or less. The accessible population included in the distribution of the survey was from higher education institutions within the United States. The institutions included varying types of demographics and research levels.

Research Design

The Delphi method was well-suited for exploring feelings of preparedness in higher education teachers who have transitioned from their expert-level fieldwork into academia (Linstone & Turoff, 2002). Multiple higher education expert faculty member viewpoints were assimilated and valued to develop an instrument by allowing the panelists to participate in the pilot survey. The goal was to find where individual perspectives converge and identify commonalities that may exist. As a result, the Delphi method was a beneficial tool for assessing complex problems and delivering feedback for higher education faculty with the use of anonymity for group communication (Linstone & Turoff, 2002; Sandrey & Bulger, 2008). The Delphi method was appropriate to help identify employees' feelings of preparedness and values within the organization, which

may inform an emerging set of best practices to be used by administrators to improve new faculty onboarding processes (Linstone & Turoff, 2002).

Numerical data were obtained from the distributed instrument using Qualtrics, an online cloud-based software used to gather and analyze data, and were analyzed statistically using version 26 of the Statistical Package for Social Sciences (SPSS). A quantitative research design was chosen because it provided an opportunity to survey a large number of participants and quantify the problem to numerical data that were transformed into usable statistics (Muijs, 2011). Kaynardağ (2017) used a similar survey format as a traditional way of obtaining information from a large population to determine differences between pedagogically trained teachers versus non-pedagogically trained teachers. Additionally, Martin et al. (2020) distributed a survey to three major educational organizations in the United States to obtain data on faculty competence levels using virtual teaching platforms.

Phase One: Delphi Method

In this initial phase of research, an expert panel of approximately 10 faculty members was assimilated for the Delphi from departments at two beta testing sites in the southern region of the United States that have a history of faculty members who came from field work prior to teaching. Herzberg's Two-Factor Theory was used to guide the research process relating to employee feelings of preparedness (Herzberg et al., 1959). The panelists participated in 4 rounds of the Delphi process to evaluate the variables and reach consensus regarding feelings of preparedness. This was an iterative process that required evaluation followed by re-evaluation of data to determine possible themes and common ideas from the participants (Murry & Hammons, 1995; Nworie, 2011).

An invitational email was sent to faculty panelists who have held higher education teaching positions for 5 years or less. Return instructions were provided to obtain informed consent. During the identification stage of the Delphi process, panelists were given a survey as well as a series of open-ended questions. Questions addressed the general topics surrounding levels of preparedness as higher education faculty members including opportunities for mentorship, prior teaching experience, and the administrative role of the onboarding process. Inclusion of open-ended questions were recommended for round one to assist in projecting and investing of the problem (Scheele, 1975). The open-ended questions were eliminated by the end of the Delphi process. Since the overall goal in the study design was to provide a questionnaire, a preliminary questionnaire was an appropriate initial step in the process (Collins, 2010; Scheele, 1975).

Panelists used a five-point Likert scale to rate the importance of potential feelings of preparedness. Martinez and Martinez (2019) found that placing value on the feelings of preparedness was important to the teaching profession in higher education. Similarly, Waltman et al. (2012) used feelings of preparedness to determine overall job satisfaction among 12 research universities across the United States. Moreover, panelists provided feedback on the wording of the survey instrument and included additional items based on their perceived experiences of onboarding as a new faculty member (Collins, 2010; Nworie, 2011; Tigelaar et al., 2004). At the completion of the first stage of the process, a framework was provided for the subsequent Delphi process. In doing so, panelists were able to add and adjust as needed, which was a new feature in subsequent phases. A benefit of this approach was to provide the experts an opportunity to give valuable input by identifying information that the researcher may have overlooked, therefore decreasing

the potential for developing a weak questionnaire (Murry & Hammons, 1995; Nworie, 2011).

The researcher collected all responses from stage one and provided comments for each of the variables as well as additives from the panelists (Murry & Hammons, 1995; Sandrey & Bulger, 2008). Variables included information such as mentorship opportunities, professional training, and level of administrative involvement. After data were processed, the questionnaire was re-distributed to the expert panel to begin round two of the Delphi process. The panelists were given the updated list of variables of feelings of preparedness for their ranking on a five-point Likert scale (Collins, 2010; Murry & Hammons, 1995; Nworie, 2011).

Round three proceeded in the same manner as round two to provide stabilization of the results (Murry & Hammons, 1995; Sandrey & Bulger, 2008). Consensus among panelists is commonly reached when 75% agreement occurs on any of the variables in the Delphi process (Murry & Hammons, 1995; Tigelaar et al., 2004). Work by Lawshe (1975) supports the use of the content validity during the Delphi process. As a result of the Delphi process, a questionnaire was developed to determine feelings of preparedness of new faculty members in higher education. Additional demographic information was included such as age, gender, years of teaching, education level, types of degrees, prior teaching experience, and previous professional development opportunities.

The role of this researcher was to lead the Delphi process from start to completion. The researcher had multiple roles during the Delphi process as developer, correspondent, and facilitator (Murry & Hammons, 1995). During the development phases, the researcher gathered information about perceptions of onboarding procedures

for new higher education faculty to create the initial questionnaire. As a correspondent, the researcher clarified comments and ratings after each round of the Delphi (Collins, 2010). The researcher maintained confidentiality of participants' identities and responses. Responses were shared between participants in order to reach consensus; however, the researcher was the only person with access to the raw data. Lastly, the researcher served as facilitator to allow for a dialogue between panelists to occur anonymously for sharing of their ideas about onboarding procedures for new higher education faculty (Collins, 2010; Murry & Hammons, 1995).

Phase Two: Scaled Instrument Distribution

The survey was distributed using non-probability purposive sampling methods, specifically total population sampling, among all faculty members holding a first-time teaching appointment within the past 5 years. This type of sampling technique was chosen based on the general knowledge about the population and the well-defined characteristics of the subgroup. Purposive sampling allowed for the survey to be appropriately distributed to faculty members within the university to eliminate non-faculty members (Buzinski, 2009; Kirk, 2017; Ngemegwai, 2018).

Participants in the data collection phase included faculty who held higher education teaching jobs for 5 years or less. A study invitation and survey link were sent to higher education faculty members nationwide in every geographical region of the United States. University faculty directories that were made accessible to the public were used for survey distribution. The email contained a brief introduction of the researcher and the purpose of the study. General information was provided that included the qualifying criteria of higher education faculty who began teaching 2016 or after. The email requested that the recipient share the email with other colleagues who may qualify.

Additionally, deans of various colleges were contacted to disseminate the email to qualifying faculty members. An initial question in the demographic section eliminated all survey participants who began teaching prior to 2016. Participants were not limited to their educational backgrounds, teaching content areas, or appointment ranks. The survey was open for a 3-week time period and achieved the suggested sample size of at least 100 subjects for factor analysis (Gorsuch, 1983; Kline, 1994).

Demographics

Participant demographics were broken down by gender, age, ethnicity, highest degree held, year started teaching in higher education, geographical location, area of study by degree, current teaching concentration, new employee assistance department designated at the institution, geographical location, and annual enrollment classification. Out of 101 total participants, the gender breakdown was 80 females and 21 males. Participants responses for age were grouped by decade as follows: 20-29 (12), 30-39 (52), 40-49 (20), 50-59 (13), 60-69 (4), 70 or higher (0). Ethnicity breakdown was 83 Caucasians, 8 African Americans, 3 Asian, 4 Latino or Hispanic, 3 other/mixed. The classification of initial year of teaching in higher education was 2016 (20), 2017 (15), 2018 (16), 2019 (17), 2020 (14), and 2021 (19). When asked if their institutions had a designated department for new employee assistance, 23 participants selected yes, 48 participants selected no, and 30 participants stated they do not know. Geographical location within the United States was broken down into South (50), West (19), Mid-Atlantic (7), Midwest (15), Southwest (6), and New England (4). Annual student enrollment classification at the institutions where participants teach is as follows: 31

small (fewer than 5,000 students), 41 medium (5,000-15,000 students), and 29 large (more than 15,000 students).

Degree Areas and Teaching Content Classification

Participants were asked demographical questions that identified various areas of their degrees and teaching content classifications. The breakdown for highest degree held is as follows: bachelor's degree (6), master's degree (37), PhD/EdD (53), other (5).

Bachelor's degree area of study was grouped as follows along with the number of participants in each content area: health science fields (38), social sciences/humanities (20), education (8), STEM (4), English (4), communication/broadcasting/media (10), business (4), and other (13). Master's degree area of study was grouped as follows along with the number of participants in each content area: health science fields (27), social sciences/humanities (13), education (22), STEM (2), English (3), communication/broadcasting/media (3), business (8), other (7), and not applicable (16).

PhD/EdD degree area of study was grouped as follows along with the number of participants in each content area: health science fields (22), social sciences/humanities (11), education (17), STEM (1), English (1), communication/broadcasting/media (2), business (1), other (7), not applicable (38), and did not answer (1). Current teaching concentration was grouped as follows along with the number of participants in each content area: health science fields (39), social sciences/humanities (13), education (20), STEM (4), English (3), communication/broadcasting/media (5), business (10), and other (7).

Identification of Variables

Variables included in the survey mirrored those identified in the final round of the Delphi process. The independent variables in RQ1 are demographic items included in the survey (year started teaching, age, ethnicity, degrees held, teaching content area, institutional employee assistance department, geographical location, and annual student enrollment classification). The dependent variables in RQ1 are the three factors grouped by feelings of preparedness (support and training, communication from administration, and confidence in teaching).

Role of the Researcher

The role of this researcher was to lead the data collection phase from start to completion. There were no outside ethical considerations, no conflicts of interest, and no use of incentives for participation. A potential bias of the researcher is the current classification of a new faculty member teaching 5 years or less in higher education. As a healthcare professional coming from clinical fieldwork, the researcher experienced unique feelings of preparedness during the career transition into teaching in higher education. Personal experiences of the researcher were not used in this study. Additionally, the Delphi process reduced bias in the instrument.

Data Collection

Informed consent was obtained from all participants through the guidelines of the Institutional Review Board (IRB). This communicated the basic ethical obligation and legal requirement of the research team. The survey was distributed through a two-step sampling process using non-probability purposive sampling methods, specifically total population sampling, among all faculty members holding a first-time teaching

appointment within the past 5 years. This type of sampling technique was chosen based on the general knowledge about the population and the well-defined characteristics of the subgroup. Purposive sampling allowed for the survey to be appropriately distributed to faculty members within the university to eliminate non-faculty members (Buzinski, 2009; Kirk, 2017; Ngemegwai, 2018). The survey was open for a 3-week time period and gained the suggested sample size of at least 100 subjects for factor analysis (Gorsuch, 1983; Kline, 1994).

Factor Analysis

The three factors created as a result of factor analysis were used as the dependent variables. Independent variables are demographic items included in the survey (year started teaching, age, ethnicity, degrees held, teaching content area, institutional employee assistance department, geographical location, and annual student enrollment classification). A factor analysis was performed to identify a set of underlying factors that explain relationships between correlated variables (Abbott, 2014). Researcher interpretation is crucial throughout the factor analysis process (Muijs, 2011). By pulling out individual concepts, the researcher is able to investigate variables that are not easily measured directly from a larger number. When using factor analysis, it is assumed that each item in the test is of equal difficulty and test items are equivalent instruments (Muijs, 2011).

Only items extracted that are substantively important and explain enough of the variance will be retained (Muijs, 2011). This will be determined through a series of three main steps. The first step is to plot the reduction in explained variance with each factor in a scree plot, which may suggest that more or less factors are needed. The second step of

factor analysis produces factor loadings, which are the Pearson correlation coefficients of an original variable. Factor loading can be used as a means of item reduction and grouping into construct subscales. Each variable will be more or less strongly correlated to each factor which causes factor loading with each factor varying from -1 to +1. The closer they are to either 1 or -1, the more strongly they are correlate with that factor. In contrast, the closer they are to 0, the weaker the correlation with that factor. The final step in factor analysis is rotation. When factors are extracted to create variance and identify uncorrelated factors, typically one main factor is created. This method using one main factor often produces results that are difficult to interpret. To get multiple factors with more interpretable results, a rotation must be utilized. Options for rotation dependent upon correlated/uncorrelated factors include oblique, varimax, and quartimax rotation (Muijs, 2011).

Before a sum of variables can be scaled, the internal consistency reliability of the scales must be determined through the measurement of Cronbach's alpha (Abbott, 2014). Cronbach's alpha is a measure of the correlations between all of the variables that will allow the researcher to determine the extent to which all of the variables within the scale are measuring the same thing. Cronbach's alpha will vary between 0 and 1, with 0 being no relationship at all. A high Cronbach's alpha indicates high levels of internal consistency. Cronbach's alpha above 0.7 is acceptable, though the researcher must take into account the number of items in the scale (Abbott, 2014).

Multiple Linear Regression

Following factor analysis, multiple linear regressions were performed to examine factors affecting feelings of preparedness (Abbott, 2014). Multiple regressions are

appropriate to evaluate the effect of multiple independent variables on one dependent variable (Muijs, 2011). The use of multiple regression will reveal which independent variables will have a contribution in the prediction of the dependent variable as well as how much each independent variable is contributed. Multiple regression produces a coefficient that allows the researcher to calculate a p-value indicating whether or not the relationship is statistically significant. Additionally, a measure called R squared (R^2) is produced as the amount of variance in the dependent variable explained by all of the predictors combined (Muijs, 2011).

Multiple regression includes the following assumptions: (1) the dependent variable must be continuous, and the independent variables can be categorical or continuous, (2) data should show homoscedasticity, (3) residuals should be normally distributed, (4) there will be no significant outliers, (5) there needs to be a linear relationship between the dependent variable and each of the independent variables, and (6) the data cannot have multicollinearity (Abbott, 2014). A scatterplot can be created for each independent variable to test the linear relationships between the dependent variable and the independent variables (Abbott, 2014). An alternative to the scatterplot is to use the Pearson's coefficient calculation for each relationship to determine if they have adequate correlation. Checking the assumption of no multicollinearity in the data means that your independent variables cannot be correlated to ensure that you are not measuring the same thing. Testing for multicollinearity is done when a multiple regression is performed (Abbott, 2014).

The first step in running a multiple regression is to check the residuals for normality by producing a graph that closely follows the line indicating residuals are

normally distributed (Abbott, 2014). Step two is to check the homoscedasticity. A graph that produces no definite shape indicates good homoscedasticity. Regression results will show the correlation I value. ANOVA will reveal how well the regression equation fits the data. If the p-value is less than 0.05, the regression model statistically significantly predicts the dependent variable and is a good fit for the data. R^2 will reveal how much of the variance can be explained by the independent variable. R^2=0.1 reveals that variance is perfectly explained; in contrast, R^2=0.0 explains nothing. The regression will be performed by removing one variable at a time. The R value, ANOVA's significance, and the variable's significances will reveal when the proper number of variables have been removed. The subtractive method can be used to remove variables one at a time. The best equation to be used explains the highest percent of variability and has the highest correlation (Abbott, 2014).

Threats to Validity

Validity of the results were determined by their usefulness to guide future administrative standards for onboarding processes of new faculty members. Threats to validity have an impact on the generalizability of results from the research (Shadish et al., 2002). If the sample size is ultimately lower than desired, the Delphi method is at risk of attrition. The invitation email was sent to all faculty members in multiple universities to maintain the minimum recommend sample size of 10 (Gorsuch, 1983; Kline, 1994). Additionally, the process of utilizing multiple universities reduces the possibility of mono-operation bias since this is a one-time survey and multiple treatments are not applicable as Shadish et al. (2002) recommends. Additional threats include lower power and self-reporting. The Delphi method was used as a way of altering the survey

instrument to meet the sample population needs to reduce the risk of instrumentation as a threat to validity (Linstone & Turoff, 2002; Shadish et al., 2002). A final threat to validity is construct confounding which is being addressed by the random selection of participants who meet the study criteria (Pourhoseingholi et al., 2012; Shadish et al., 2002).

CHAPTER 4

RESULTS

The purpose of this study was to determine factors affecting feelings of preparedness for higher education teachers who have transitioned from their expert-level fieldwork into academia. Having the qualities of an experienced practitioner is highly desired to fill faculty roles, but the expertise as a practitioner does not necessarily develop the teaching skills (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). This chapter will detail the results of this study, starting with the Delphi method to gather feedback from a panel of experts. Following the Delphi method, the results of the factor analysis and multiple regression will be presented in detail along with other data analyses in the context of the research question.

Phase One: Delphi Method

In this initial phase of research, an expert panel of faculty members was assimilated for the Delphi method from departments at two beta testing sites in the southern region of the United States that have a history of faculty members who came from field work prior to teaching. Herzberg's Two-Factor Theory was used to guide the research process relating to employee feelings of preparedness (Herzberg et al., 1959). The panelists participated in four rounds of the Delphi process to evaluate the variables and reach consensus regarding feelings of preparedness. This was an iterative process

that required evaluation followed by re-evaluation of data to determine possible themes and common ideas from the participants (Murry & Hammons, 1995; Nworie, 2011).

An invitational email was sent to faculty panelists who have held higher education teaching positions for 5 years or less. The email explained the Delphi method and the procedure for responding to the survey prompts based on their own experiences. Below each response, participants were given the opportunity to provide feedback on that particular section. Each round of the Delphi included the human subjects consent form as the initial prompt. If participants chose not to agree to the terms in the human subjects' consent form, the survey would end. All participants in the study agreed to the terms.

A total of 10 invitation emails were sent requesting participation in round one of the Delphi with a response of nine (90%) during the 1-week time frame. Round one included a one-time demographic section. Delphi participants were two males (22%) and seven females (78%). The age breakdown included two (22%) in the 20-30 age category, two (22%) in the 31-40 age category, and five (56%) in the 41-50 age category. The highest degree held was a PhD/EdD for four (44%) participants and a master's degree for five (56%) participants. All participants (100%) were considered new teachers in higher education with the most experience coming from one (11%) participant who began teaching in higher education in 2016. The other years of experience included one (11%) participant who began teaching in higher education in 2017, three (33%) in 2018, two (22%) in 2019, one (22%) in 2020, and one (22%) in 2021. Participants held degrees from a variety of content areas including curriculum and instruction, educational leadership, early childhood education, nutrition and dietetics, anthropology/sociology/political science, communication and science disorders, human

development and family science, social studies education, psychology, and child life. Panelists used a five-point Likert scale to rate the importance of potential feelings of preparedness. Moreover, panelists provided feedback on the wording of the survey instrument and include additional items based on their perceived experiences of onboarding as a new faculty member (Collins, 2010; Nworie, 2011; Tigelaar et al., 2004). At the completion of the first stage of the process, a framework was provided for the subsequent Delphi process. In doing so, panelists were able to add and adjust as needed, which was a new feature in subsequent phases.

Once participants completed the demographic section, the actual Delphi prompts were introduced. Participants were instructed in the introductory email to respond based on their own experiences then to complete the three questions below the response to help determine if it was an appropriate prompt. The Delphi survey prompts from round one are listed in Table 1 with the corresponding editorial suggestions made.

Table 1

Delphi Round One

Prompt	Is the concept relevant?	Suggested Edits
1. My institution provided overall adequate support during the first year of my employment as a new faculty member in higher education.	Yes= 100%	-Define support
2. My institution gave me the option to have a formal workplace mentor.	Yes= 100%	- Include the concept of having an informal workplace mentor in addition to a formal workplace mentor. - Consider rewording to reflect mentor relationships that are not optional
3. Having a workplace mentor improved my overall experience as a new faculty member.	Yes= 100%	-Consider changing the phrase "overall experience" to "learning experience."
4. I received sufficient training from my institution on syllabi development.	Yes= 100%	N/A
5. I received sufficient training from my institution on how to assess student learning.	Yes= 100%	N/A
6. I received sufficient training from my institution on classroom facilitation.	Yes= 100%	N/A
7. As a "newcomer" in higher education, I feel adequately prepared to teach.	Yes= 100%	- Quantify the term "newcomer" into "someone who has taught in higher education for five years or less."
8. I feel confident that I can teach an online course effectively.	Yes= 100%	- Wording could be edited to identify if this is a measure of ability or the resources available.
9. I feel confident that I can teach an in-person course effectively.	Yes= 100%	- Wording could be edited to identify if this is a measure of ability or the resources available.
10. I feel confident that I can teach a hybrid course effectively.	Yes= 100%	- Wording could be edited to identify if this is a measure of ability or the resources available.
11. Appropriate pedagogy (the art, science, or profession of teaching) and andragogy (the art or science of teaching adults) training was provided to me as a new faculty member.	Yes= 100%	-Separate the two terms into different prompts.
12. What, if any, additional factors surrounding feelings of preparedness during the initial years of teaching in higher education should be included in this survey?	N/A	- Were teaching expectations defined and measured? - Was classroom culture (late assignments, cheating, tardiness, absence, bonus points, etc.) addressed with new employees? - What if someone feels prepared to teach because it is their field, but not necessarily prepared to teach because the institution prepared them as an employee? - What about asking a question regarding online learning platforms?

Delphi round one information was analyzed, and edits were made to responses prior to disseminating for round two. Responses from round one with consensus were not continued into round two. Some additional responses were presented based on the information from round one. The Delphi prompts from round two are listed in Table 2 with the corresponding editorial suggestions made.

Delphi round two information was analyzed, and edits were made to responses prior to disseminating for round two. Responses from round two with consensus were not continued into round two. Some additional responses were presented based on the information from round two. The Delphi prompts from round three are listed in Table 3 with the corresponding editorial suggestions made.

Round four of the Delphi was used to determine level of importance of each response for content validity. All items identified as appropriate to be used in the scaled distributed survey were included in round four. According to the Lawshe (1975) ratio chart, 50% of sample size was needed to claim content validity and 100% of the items met that threshold. The role of this researcher was to lead the Delphi process from start to completion.

The researcher had multiple roles during the Delphi process as developer, correspondent, and facilitator (Murry & Hammons, 1995). During the development phases, the researcher gathered information about perceptions of onboarding procedures for new higher education faculty to create the initial questionnaire. As a correspondent, the researcher clarified comments and ratings after each round of the Delphi (Collins, 2010). The researcher maintained confidentiality of participants' identities and responses.

Table 2

Delphi Round Two

Prompt (those from round one with consensus were not continued into round two)	Suggested Edits
1. My institution provided overall support for teaching and instruction during the first year of my employment as a new faculty member in higher education	-What about saying structured support?
2. My workplace provided me the option of having a mentor or required me to have a mentor	N/A
3. Having a workplace mentor improved my overall experience as a new faculty member.	N/A
4. As someone who has taught in higher education for five years or less, I feel adequately prepared to teach	-Maybe add adequately prepared to teach "in my content area of expertise"
5. I feel confident that I have the ability to teach an online course effectively.	N/A
6. I feel confident that I have the ability to teach an in-person course effectively.	N/A
7. I feel confident that I have the ability to teach a hybrid course effectively	N/A
8. Administration provided me well-defined teaching expectations (load, level of learning, learning outcomes, learning experiences for students).	N/A
9. My teaching expectations were adequately measured by administration.	- Maybe goals instead of expectations -Adequately can mean different things to different people
10. I was informed about the typical classroom culture at my institution (late assignment policy, bonus point policy, attendance policy).	N/A
11. My institution trained me on how to handle difficult classroom situations (cheating, poor attendance, student failing grades)	N/A
12. My institution trained me on the use of technology (learning management systems, video conferencing, anti-cheating technology) that was required for my teaching.	N/A
13. My institution offers professional development opportunities specifically related to teaching.	N/A
14. Most of the formal support I received was at the institution level rather than the college/department level.	-What if I feel I have no support? -Maybe ask about how much support I received from each area of the institution.

Table 3

Delphi Round Three

Prompt (those from round two with consensus were not continued into round two)	Suggested Edits
1. My institution provided structured support (resources, guidance) for teaching and instruction during the first year of my employment as a new faculty member in higher education.	Possibly add training to the list with resources and guidance.
2. The teaching expectations/goals that my institution gave me were periodically evaluated by administration.	-What if they did not give teaching expectations/goals?
3. From what area/s have you received formal support?	-You defined structured as resources and guidance but did not define here. - This question used "formal support" the first one said "structured support"
4. From what area did you receive the most formal support?	-Same as above regarding the adjective.

Phase Two: Scaled Instrument Distribution

Participants

Informed consent was obtained from all participants through the guidelines of the Institutional Review Board (IRB). This communicated the basic ethical obligation and legal requirement of the research team. A total of 50 surveys were discarded, and discards were due to incompletion (27), participant started teaching prior to 2016 (21), and participant not agreeing to terms in informed consent (2). Demographical information collected from the remaining 101 participants included gender, age, ethnicity, highest degree held, year started teaching in higher education, geographical location, area of study by degree, current teaching concentration, new employee assistance department designated at the institution, geographical location, and annual enrollment classification.

Variables included in the survey mirrored those identified and deemed valid in the final round of the Delphi process. The dependent variables are the three factors.

Independent variables are demographic items included in the survey (year started teaching, age, ethnicity, degrees held, teaching content area, institutional employee assistance department, geographical location, and annual student enrollment classification). Responses from the survey are displayed in Table 4.

Table 4

Survey Results

Survey Item	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
1. My institution provided structured support (training, resources, guidance) for teaching and learning during the first year of my employment as a new faculty member in higher education.	9	27	12	35	18	0
2. My workplace provided me the option of having a mentor or required me to have a mentor.	29	24	12	18	18	0
3. Having a workplace mentor improved my overall experience as a new faculty member.	2	5	10	19	14	51
4. I received sufficient training from my institution on syllabi development.	14	36	20	27	4	0
5. I received sufficient training from my institution on how to assess student learning.	20	36	24	21	0	0
6. I received sufficient training from my institution on classroom facilitation.	19	31	25	23	3	0
7. I feel confident that I have the ability to teach an online course effectively.	1	9	14	45	32	0
8. I feel confident that I have the ability to teach an in-person course effectively.	0	2	8	48	43	0
9. I feel confident that I have the ability to teach a hybrid course effectively.	2	8	18	47	26	0

Survey Item	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
10. As someone who has taught in higher education for five years or less, I feel adequately prepared to teach content in my area of expertise.	1	3	13	45	39	0
11. Appropriate pedagogy (the art, science, or profession of teaching) or andragogy (the art or science of teaching adults) training was provided to me as a new faculty member.	24	37	15	25	0	0
12. Administration provided me well-defined teaching expectations (load, level of learning, learning outcomes, learning experiences for students).	14	29	16	37	5	0
13. The teaching expectations/goals that my institution gave me were periodically evaluated by administration.	1	12	14	45	9	20
14. I was informed about the typical classroom culture at my institution (late assignment policy, bonus point policy, attendance policy).	12	28	13	38	10	0
15. My institution trained me on how to handle difficult classroom situations (cheating, poor attendance, student failing grades).	15	37	19	23	7	0
16. My institution trained me on the use of technology (learning management systems, video conferencing, anti-cheating technology) that was required for my teaching.	9	21	15	45	11	0
17. My institution offered professional development opportunities specifically related to teaching.	7	14	16	41	23	0

Tables 5 and 6 include the breakdown of survey responses related to structured support provided at varying levels of the institution.

Table 5

Result of Structured Support Question

Survey Item	Institution	College	Department	Peers	I Do Not Receive Formal Support	Did Not Answer
1. From what area have you received the most structured support (select one)?	32	7	20	31	10	1

Table 6

Areas of Structured Support Results

From what areas have you received structured support (select all that apply)?	Number of Responses
Institution	13
College	3
Department	4
Peers	12
Institution, College	2
Institution, Department	5
Institution, College, Department	3
College, Department, Peers	5
Institution, Department, Peers	5
Institution, College, Department, Peers	17
Department, Peers	12
College, Department	1
Institution, Peers	6
I do not receive formal support	13

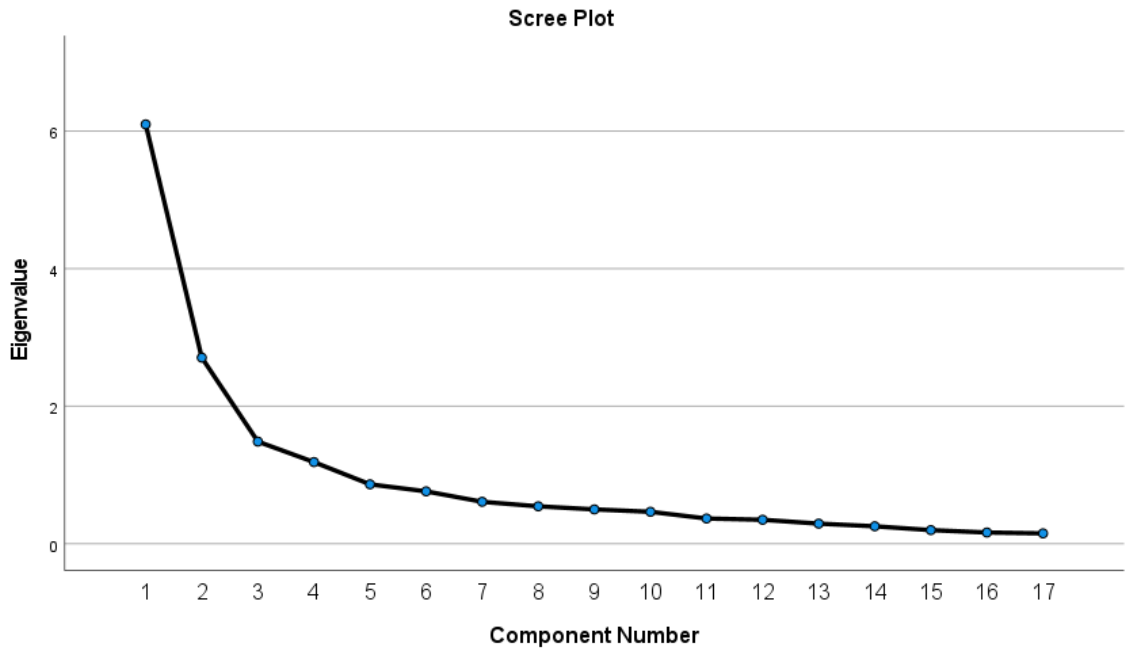
Factor Analysis

A factor analysis was an appropriate measure of evaluation as a result of the appropriate sample size (Comrey & Lee, 1992). MacCallum et al. (1999) suggested that minimum sample sizes ranging from 100 to 250 are acceptable. MacCallum et al. (1999) also noted that established ranges are dependent on the number of items in the scale, with ranges of participants to the number of items commonly found to be from 3:1 to 10:1 (Cattell, 1978; Everitt, 1975; Gorsuch, 1983). The factor analysis in this study was performed on 16 items, using the rationale of the aforementioned studies to the

appropriate number of participants for this particular factor analysis would be within 48 to 160 participants. This study included 101 participants in the factor analysis, falling within the acceptable range (Comrey & Lee, 1992). The Kaiser-Meyer-Okin (K.M.O.) measure of sampling adequacy was 0.820. This value indicates the sample size was appropriate for the factor analysis, as values within 1.00 and 0.50 are acceptable for factor analysis (Alston, 2016; Field, 2013). Bartlett's test of sphericity was used for factor analysis appropriateness for this data set. Bartlett's test of sphericity determines whether the correlations between variables are high enough with a significance level smaller than 0.05 considered adequate for factor analysis (Alston, 2016; Raasch, 2017). Bartlett's test of sphericity on this data yielded a significant value ($X^2 = 896.004$, $p = 0.00$) further indicating that factor analysis would be appropriate (Raasch, 2017). The factor analysis was performed on the data using SPSS version 25. The factor analyses were performed with varimax rotation and Kaiser Normalization. As noted by Williams et al. (2010), the scree plot was used to evaluate the number of factors appropriate to keep with each analysis (Figure 1).

Figure 1

Scree Plot for Factor Analysis



Note. The Scree plot indicates a drop in Eigenvalue variability after five factors.

Identifying the Number of Factors

An exploratory factor analysis was conducted on the Likert scale items using a varimax rotation with Kaiser normalization to identify a set of underlying factors that explain relationships between correlated variables (Abbott, 2014). The first factor analysis in this study was performed on 17 items. The result of the first factor analysis was four factors explaining 67.5% of the variance. Factor one contained six items, factor two contained five items, factor three contained four items, and factor four contained two items. The first factor analysis rotated component matrix was removed for multicollinearity because item 17 (“Having a workplace mentor improved my overall experience as a new faculty member”) loaded >.9. Once that item was discarded, factor four only had one item.

A second factor analysis was then conducted on the same data set, excluding item 17, to determine if it would remain that way. The result of the second factor analysis extracted three factors explaining 62.0% of the variance. The 16 items all loaded <0.9 with the three factors as follows: factor one with eight items, factor two with four items, and factor with four items. The three factors decided upon were support and training, communication from administration, and confidence in teaching (Table 7).

Table 7

Percent of Variance for the Three Factors

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	6.099	35.878	35.878
2	2.707	15.923	51.800
3	1.486	8.740	60.541

By pulling out individual concepts, the researcher was able to investigate variables that are not easily measured directly from a larger number. When using factor analysis, it is assumed that each item in the test is of equal difficulty and test items are equivalent instruments (Muijs, 2011). Only items extracted that were substantively important and explain enough of the variance were retained (Muijs, 2011). This was determined through a series of three main steps. The first step was to plot the reduction in explained variance with each factor in a scree plot, which may suggest that more or less factors are needed.

Naming the Factors

Each factor was given a categorical name after identifying common themes within the items of each group. Factor one, containing questions regarding mentorship,

structured support, and training received from the institution, was titled support and training. Factor two, titled communication from administration, included items about teaching expectations and communication from administration regarding classroom culture. Factor three was identified as confidence in teaching due to items surrounding confidence in teaching in-person, online, and hybrid course formats (Table 8).

Table 8

Grouped Factors and Correlations

Question Number		Correlation
Factor 1: Support and Training		
19.	I received sufficient training from my institution on how to assess student learning	0.80
18.	I received sufficient training from my institution on syllabi development.	0.77
13.	My institution provided structured support (training, resources, guidance) for teaching and learning during the first year of my employment as a new faculty member in higher education.	0.77
20.	I received sufficient training from my institution on classroom facilitation	0.76
16.	My workplace provided me the option of having a mentor or required me to have a mentor.	0.62
25.	Appropriate pedagogy (the art, science, or profession of teaching) or andragogy (the art or science of teaching adults) training was provided to me as a new faculty member.	0.58
30.	My institution trained me on the use of technology (learning management systems, video conferencing, anti-cheating technology) that was required for my teaching.	0.58
31.	My institution offered professional development opportunities specifically related to teaching.	0.55
Factor 2: Communication from Administration		
28.	I was informed about the typical classroom culture at my institution (late assignment policy, bonus point policy, attendance policy).	0.87
26.	Administration provided me well-defined teaching expectations (load, level of learning, learning outcomes, learning experiences for students).	0.78
29.	My institution trained me on how to handle difficult classroom situations (cheating, poor attendance, student failing grades).	0.73
27.	The teaching expectations/goals that my institution gave me were periodically evaluated by administration.	0.68
Factor 3: Confidence in Teaching		
23.	I feel confident that I have the ability to teach an in-person course effectively.	0.88
21.	As someone who has taught in higher education for five years or less, I feel adequately prepared to teach content in my area of expertise.	0.82
22.	I feel confident that I have the ability to teach an online course effectively.	0.82
24.	I feel confident that I have the ability to teach a hybrid course effectively.	0.78

Research Question and Multiple Regression

RQ1: What factors affect new faculty members' feelings of preparedness of teaching in higher education?

Multiple regression analyses were performed to determine factors affecting new faculty members' feelings of preparedness of teaching in higher education. After the initial multiple regression on factor one, items having p values greater than 0.05 were removed including ethnicity and master's degree area of study. The remaining factors statistically significantly predicted support and training, F (7,92) = 3.92, P = .00 explaining 23.0% of the variance. The resulting equation to predict support and training is equal to -119.32 + .060 (year started teaching in higher education) - .282 (gender) + .124 (age) - .274 (highest degree held) - .022 (bachelor's degree area of study) - .061 (PhD/EdD area of study) - .427 (new employee assistance department). Using the subtractive method of eliminating factors to create a better predicting equation did not yield a better-explained variance.

After the initial multiple regression on factor two, items having p values greater than 0.05 were removed including ethnicity, institutional enrollment classification, and teaching concentrations. The remaining factors statistically significantly predicted communication from administration, F (9,90) = 2.91, P = .01 explaining 22.5% of the variance. The resulting equation to predict communication from administration is equal to -164.96 + .084 (year started teaching in higher education) - .775 (gender) + .114 (age) - .034 (highest degree held) - .065 (bachelor's degree area of study) + .090 (master's degree area of study) - .083 (PhD/EdD area of study) - .389 (new employee assistance

department) + .061 (geographical location). Using the subtractive method of eliminating factors to create a better predicting equation did not yield a better-explained variance.

Multiple regressions were then performed on factor three. After the initial multiple regression on factor three, the item having a p value greater than 0.05 was removed which included bachelor's degree area of study. The remaining factors statistically significantly predicted confidence in teaching, F (10, 89) = 2.98, P =.00 explaining 25.1% of the variance. The resulting equation to predict confidence in teaching is equal to 239.34 - .253 (gender) + .088 (age) - .133 (highest degree held) + .076 (PhD/EdD area of study) - .105 (new employee assistance department) - .116 (year started teaching in higher education) - .014 (ethnicity) - .013 (master's degree area of study) - .007 (current teaching concentration) + .092 (geographical location). Using the subtractive method of eliminating factors to create a better predicting equation did not yield a better-explained variance.

CHAPTER 5

DISCUSSION

The purpose of this study was to determine factors affecting feelings of preparedness for higher education teachers who have transitioned from their expert-level fieldwork into academia. This study was completed in multiple stages; the initial stage was the Delphi process in which a questionnaire was developed and used in the second stage. The second stage was where the developed questionnaire was used to evaluate the research question presented below.

RQ1: What factors affect new faculty members' feelings of preparedness of teaching in higher education?

It is a common practice for new university faculty members to be recruited from their areas of expertise as clinicians and practitioners (Eret et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Transitioning from a chosen field into a novice teacher can carry varying weights depending on university teaching appointments. Having the qualities of an experienced practitioner is highly desired to fill faculty roles, but the expertise as a practitioner does not necessarily develop teaching skills (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016).

Due to the frequent hiring of faculty with limited andragogy training, university learning outcomes can be jeopardized, and the quality of the university could suffer as a result of the lack of foundational educational knowledge teachers need to successfully possess the skill sets required in the higher education classroom setting (Eret, et al., 2018; Freeman & DiRamio, 2016; Savage & Pollard, 2016). Former president of Harvard University, Derek Bok had strong opinions regarding this problem stating "It's astonishing, a major failing, that the universities do not teach their future teachers. Academia is the only professional system that doesn't instruct its newcomers in how to do what they will spend most of their time doing" (Bethune, 2006, para. 2).

This study used quantitative methods to determine feelings of preparedness for higher education teachers who have transitioned from expert-level fieldwork into academia. Multiple higher education expert faculty member viewpoints were assimilated and valued to develop an instrument by allowing the panelists to participate in the pilot survey. The goal was to identify commonalities that may exist. As a result, the Delphi method was a beneficial tool for assessing complex problems and delivering feedback for higher education faculty with the use of anonymity for group communication (Linstone & Turoff, 2002; Sandrey & Bulger, 2008). Additionally, the Delphi method helped identify feelings of preparedness and values within the organization, which may inform an emerging set of best practices to be used by administrators to improve new faculty onboarding processes (Linstone & Turoff, 2002).

Phase One: Delphi Method

In this initial phase of research, an expert panel of approximately 10 faculty members was assimilated for the Delphi from departments at two beta testing sites in the southern region of the United States that have a history of faculty members who came from field work prior to teaching. Herzberg's Two-Factor Theory was used to guide the research process relating to employee feelings of preparedness (Herzberg et al., 1959). The panelists participated in at least three rounds of the Delphi process to evaluate the variables and reach consensus regarding feelings of preparedness. This was an iterative process that required evaluation followed by re-evaluation of data to determine possible themes and common ideas from the participants (Murry & Hammons, 1995; Nworie, 2011).

Comments received from round one mainly focused on the wording of each survey item. When evaluating mentoring relationships, the panel members identified the need for more detailed subcategories of mentoring such as informal mentoring, formal mentoring, and forced mentoring. The suggestions to focus on mentoring opportunities highlight the importance of workplace relationships similar to the findings of Kilbourne et al. (2018). Additional panel suggestions given in the open-ended prompt helped the researcher focus on areas that were not previously identified in the survey such as communication of teaching expectations and classroom culture. The need for communication is highlighted in the work of Kleijnen et al. (2011) showing that faculty perceptions vary greatly between departments and communication regarding quality control measures that should take precedence in all departments to create a culture accepting of change and improvement.

After data were processed, the questionnaire was re-distributed to the expert panel to begin round two of the Delphi process. The panelists were given the updated list of variables of feelings of preparedness for their ranking on a five-point Likert similar to the work of Collins (2010), Murry and Hammons (1995), and Nworie (2011). Survey items from round one that had consensus were removed for round two. Round two comments suggested more detail within each survey prompt. For example, rather than asking about "overall support", the suggestion was made to say "structured support" to provide more meaning. A second suggestion regarding support was made to identify which areas within each institution that provide the most support. Including survey questions about administrative support is of value to this study as evidenced by the work Perry et al. (2019) stating that administrative support strategies should be considered for individuals transitioning to faculty roles and that higher education institutions should have the goal of fostering a safe place for professionals to have intentional conversations surrounding these issues.

Round three proceeded in the same manner as round two to provide stabilization of the results (Murry & Hammons, 1995; Sandrey & Bulger, 2008). Consensus among panelists is commonly reached when 75% agreement occurs on any of the variables in the Delphi process (Murry & Hammons, 1995; Tigelaar et al., 2004). Work by Lawshe (1975) supports the use of the content validity during the Delphi process. According to the Lawshe (1975) ratio chart, 50% of sample size was needed to claim content validity, and 100% of the items met that threshold. As a result of the Delphi process, a questionnaire was developed to determine feelings of preparedness of new faculty members in higher education.

Phase Two: Scaled Instrument Distribution

The survey was distributed using non-probability purposive sampling methods, specifically total population sampling, among all faculty members holding a first-time teaching appointment within the past 5 years. This type of sampling technique was chosen based on the general knowledge about the population and the well-defined characteristics of the subgroup. Purposive sampling allowed for the survey to be appropriately distributed to faculty members within the university to eliminate out non-faculty members (Buzinski, 2009; Kirk, 2017; Ngemegwai, 2018).

Participants in the data collection phase included faculty who held higher education teaching jobs for 5 years or less. An initial question in the demographic section eliminated all survey participants who began teaching prior to 2016. Participants were not limited to their educational backgrounds, teaching content areas, or appointment ranks. The survey was open for a 3-week time period and achieved the suggested sample size of at least 100 subjects for factor analysis (Gorsuch, 1983; Kline, 1994).

Factor Analysis

A factor analysis was an appropriate measure of evaluation as a result of the appropriate sample size (Comrey & Lee, 1992). MacCallum et al. (1999) suggested that minimum sample sizes ranging from 100 to 250 are acceptable. MacCallum et al. (1999) also noted that established ranges are dependent on the number of items in the scale, with ranges of participants to the number of items commonly found to be from 3:1 to 10:1 (Cattell, 1978; Everitt, 1975; Gorsuch, 1983). The factor analysis in this study was performed on 16 items, using the rationale of the aforementioned studies to the appropriate number of participants for this particular factor analysis would be within 48

to 160 participants. This study included 101 participants in the factor analysis, falling within the acceptable range determined by Comrey & Lee (1992).

An exploratory factor analysis was conducted on the Likert scale items using a varimax rotation with Kaiser normalization to identify a set of underlying factors that explain relationships between correlated variables (Abbott, 2014). The result of the final factor analysis extracted three factors explaining 62.0% of the variance. The 16 items all loaded <0.9 with the three factors as follows: Factor 1 with eight items, Factor 2 with four items, and Factor 3 with four items.

The three factors names were Support and Training, Communication from Administration, and Confidence in Teaching (Table 8). The support and training factor consisted of items regarding training from the institution on syllabi development and assessment of student learning. Additional items included in that factor were about mentorship, professional development, and technology training. These items align with previous literature on support and training (Bowman et al., 2018; Kilbourne et al., 2018; Reddy et al., 2016). Factor 2, titled Communication from Administration, included items about teaching goals/expectations and communication from administration regarding classroom culture and difficult classroom situations. These items align with previous literature on communication in higher education (Kaynardağ, 2017; Kleijnen et al., 2011). Factor three, titled Confidence in Teaching, included items about confidence in teaching courses in-person, online, and hybrid as well as teaching in their areas of expertise. Factor three is in line with the work of Persellin and Goodrick (2010) who explored the importance of confidence in teaching and determined that institutions should

consider the use of professional development workshops to enhance the teaching effectiveness and confidence of faculty members.

Multiple Regression

RQ1: What factors affect new faculty members' feelings of preparedness of teaching in higher education?

To evaluate if there were any relationships between demographical items and feelings of preparedness, multiple regressions were performed using the three factors drawn from the factor analysis. For factor one, support and training, multiple regressions explaining 23.0% of the variance revealed that the strongest relationships were (in order of importance) having a designated department for new employee assistance, gender, and highest degree held.

The results of this study show that not having a designated department for new employees or not making sure people know about a designated department for new employees has a negative effect on the support and training received from administration.

Administrators in higher education are increasingly challenged to develop effective ways of supporting new faculty (Koch, 2008). Coaching can be an efficient way to meet individual needs of new faculty in organizations that have a supportive culture (Cox, 2012). Investing in the professional development of new faculty by supporting their needs and concerns can provide enhanced learning experiences for students (Cox, 2012; Koch, 2008). It is suggested that higher education management through the institutional supportive mechanisms and administrative participatory leadership styles are important factors during the establishment of new faculty (Vatanartıran, 2013). While limited research is available that provides insight into the establishment processes of new faculty

in higher education (Vatanartıran, 2013), this research provides information that demonstrates the need for a new faculty support department or the need to communicate the services of that department to new faculty.

The second important item from factor one tells us that being a female new faculty member negatively influences the amount of support and training received. Tessens et al. (2011) had similar findings when investigating administrative support differences among genders. Tessens et al. (2011) recommended that leadership development training and support for females in higher education teaching roles are necessary to provide targeted opportunities for mentorship and peer networking. By providing greater opportunities for female faculty members to receive support and training, mentoring roles can be established to help females identify specific needs within their first years of teaching in higher education. Behari-Leak's (2017) research supports the practice of providing newcomers a program for classroom preparation, but doing so emphasizes the importance of social realm contexts. It would behoove universities to initiate programs that actively engage new faculty with real-life situations. By simply introducing surface level pedagogical practices, it is believed that teachers are not fully equipped for inclusivity in higher education (Behari-Leak, 2017).

The third important finding of factor one shows that having a higher terminal degree has positive effect on support and training received or those with higher terminal degrees are more likely to seek support and training. In order for higher education institutions to adequately equip new employees for teaching success, employers must provide effective and specific faculty orientations and evaluations, offer continual learning workshops throughout the initial year of teaching, and be forthcoming with all

faculty expectations regardless of their appointment ranking (Bowman et al., 2018). In addition, intentional mentorship from higher ranked faculty should be offered as a means of support for new faculty (Bowman et al., 2018).

The results from factor one are supported from the work of Reddy et al. (2016) stating that there is a need for a balancing act including aspects of preparation training other than technology such as administrative mentoring and peer support groups. Similarly, Kilbourne et al. (2018) suggests that new faculty members utilize mentorship as a means to gain support during their career transition into higher education. Kilbourne et al. (2018) recommended that new faculty follow some guidelines including the regular use of self-reflection as an avenue of professional growth, evaluation of personal standards, initiation and maintenance of workplace relationships and mentors, and finally taking ownership in the professional development process (Kilbourne et al., 2018). An additional focus fully supported in the literature shows that pedagogical preparation and online training are instrumental in effectively preparing both new and veteran faculty in higher education (Bhutto et al., 2016; Brinkley-Etzkorn, 2018; Silander & Stigmar, 2019). Having a designated department for new employees and ensuring that people know about a designated department for new employees can help novice faculty receive support and training from administration.

For Factor 2, communication from administration, multiple regressions explaining 22.5 % of the variance revealed that the strongest relationships were (in order of importance) gender, having a designated department for new employee assistance, and age. Being a female negatively affects the amount and type of communication received from administration. The findings of Tessens et al. (2011) reveal that administration

establishing people management skills, including communication, is important in creating internal and formal support networks for females working in higher education. Secondly, this study found that not having a designated department for new employees or not making sure people know about designated department for new employees has a negative effect on communication from administration. Kleijnen et al. (2011) reported that faculty perceptions vary greatly between departments, causing researchers to conclude that communication regarding quality control measures should take precedence in all departments to create a culture accepting of change and improvement. The third important finding from factor two indicates that faculty members of older age have a stronger positive effect on receiving communication from administration. Although the findings of Ali and Prasad (2019) revealed age discrimination to be more prevalent in women faculty, that comparison was beyond the scope of this study. Perry et al. (2019) identified one common challenge as the workplace socialization process while establishing individual identities. Additional obstacles noted from Perry et al. (2019) were gender, race, and age. It is suggested that administrative support strategies should be considered for individuals transitioning to faculty roles and that higher education institutions should have the goal of fostering a safe place for professionals to have intentional conversations surrounding these issues (Perry et al., 2019). The work of this study aligns with the recommendations of Perry et al. (2019).

For Factor Three, confidence in teaching, multiple regressions explaining 25.1% of the variance revealed that the strongest relationships were (in order of importance) gender, highest degree held, year started teaching in higher education, having a designated department for new employee assistance. Results from factor three show that

being a female negatively effects confidence in teaching. In addition to the findings of Tessens et al. (2011), who identified that male faculty members have greater administrative support, it was revealed that males were likely to be more confident than female faculty which support the findings of this study.

The second major result from factor three shows that having a higher terminal degree has a positive effect on confidence in teaching. Studies examining higher education faculty appointments and degree rankings have been well explored in the literature. Ott and Cisneros (2015) suggest that due to the restricting budgets across universities nation-wide, tenured faculty have been replaced with lower degree holding non-tenure track positions. While non-tenured track faculty are still highly capable of producing quality work, they are equipped with fewer resources from administration. Teaching and learning may be adversely affected when the unintended consequences of a lack of higher education training and resources are not considered by institutional administration (Ott & Cisneros, 2015). Although the work of Ott and Cisneros (2015) does not have strong results about teaching confidence and degree ranking, the results of this study show that teachers who hold higher degrees have more confidence in teaching.

Results from Factor Three reveal that years of experience in teaching has an effect on confidence in teaching. Much of the current literature explores confidence in teaching in relation to the amount of professional development faculty have had. Since professional development in this study is another factor and not a demographic, a comparison between the two was beyond the scope of this study. Sadler (2013) examined the self-confidence of new teachers in higher education and found that content knowledge and teaching skills were related to feelings of self-confidence, with experience being a

key factor in their overall perception. The findings of Sadler (2013) and the findings of this study both support the need for administrative support in new faculty to help foster feelings of confidence.

The last finding of importance from factor three shows that not having a designated department for new employees or not making sure people know about designated department for new employees has a negative effect on confidence in teaching. Institutions should consider the use of professional development workshops to enhance the teaching effectiveness and confidence of faculty members (Persellin & Goodrick, 2010). While the traditional practice of preparing primary and secondary education teachers with foundational pedagogical knowledge is seen worldwide, higher education teachers often lack the tools necessary to foster adequate teaching outcomes due to their lack of pedagogy and andragogy training (Pew, 2007). Interestingly, 0% of participants in this study strongly agree and only 25% agree that pedagogical and/or andragogical training was provided to them as new faculty. Those results do not seem to be reflected in their confidence levels as negatively as one might expect with 32% of participants who strongly agree and 45% who agree that they have confidence in teaching online, 43% strongly agree and 48% agree that they have confidence in teaching in-person, and 26% strongly agree while 47% agree that they have confidence in teaching in a hybrid format. Comparing the two factors against each other was beyond the scope of this study; therefore, no statistical descriptors are available beyond the aforementioned information.

Conclusion and Implications

Designated Department for New Faculty

A common theme identified through the findings of all three factors in this study was the importance of having a designated department for support of new faculty and making sure employees are aware of the department. The findings suggest that there is a great need for a well-established new faculty department that can focus on the support and development of teachers beyond the initial days of employment that typical orientation meetings address. These results support other findings that suggest pedagogical preparation is instrumental in effectively preparing both new and veteran faculty in higher education (Bhutto et al., 2016; Brinkley-Etzkorn, 2018; Silander & Stigmar, 2019). Having a designated department for new employees and making sure people know about a designated department for new employees can help novice faculty receive support and training from administration. Having no department for new employee support or not communicating the services of that department to new employees has a negative effect on support and training, communication from administration, and confidence in teaching. The size and geographical location of the institution did not contribute to any of the equations; therefore, supporting new teachers through the services of a designated department is obtainable for all institutions regardless of the location or size.

Influence of Gender

A second theme identified through the findings in this study was the influence of gender on all three factors. Gender influences the amount of support and training received. It can be generalized that communication from administration targets males or

females are less likely to seek greater communication. Additionally, females are less likely to get clarity in communication from administration. Similar to the previous factor, results imply that either communication from administration targets males or that females are less likely to seek greater communication. Lastly, gender affects confidence in teaching. Because the coefficients were negative in the equation, it suggests that females have less confidence in teaching. The results of this study support the findings of Tessens et al. (2011) who identified that male faculty members have greater administrative support and that males were likely to be more confident than female faculty.

Limitations

While the review of literature was comprehensive and the most prominent theoretical criteria were identified, something could have been missed that would have changed the outcomes of the study. Items were validated through the Delphi method, and it is possible that if someone repeated the validation process with different faculty under different circumstances, other items could have been found. A study limitation was a major severe weather incident that occurred immediately prior to the survey distribution. Although an acceptable number of total participants was reached, the response rate from some universities in that region was decreased because their campuses were temporarily closed.

It is possible that experiences of faculty members who started teaching in 2020 or 2021 were influenced by factors related to COVID-19. To determine if there was a difference in responses from those participants, an independent t-test was run on each factor. There was no statistically significant difference for factors 1 or 2 (support and training or communication from administration). There was significance for factor 3

(confidence in teaching), but the data do not reveal whether this difference is because participants started teaching during a pandemic or because they have less teaching experience than the other participants in the study. If this study were repeated in 2-3 years, a better determination could be made.

Postmortem

This study attempted to include a broad range of demographics that could impact feelings of preparedness. To better delineate these differences, more demographical questions specific to participants' careers prior to teaching in higher education could be included. Some careers can be implied based on their degrees, but it would be beneficial to compare factors against former careers. Doing so could help identify if any teaching skills embedded into daily job tasks in other careers subsequently helped form their abilities and feelings of preparedness as a new teacher in higher education.

Recommendations for Future Research

Future research should investigate gender issues and inequalities that females experience in higher education. While there is ample research that identifies differences among genders in higher education faculty, the reason behind those differences is important as administrators aim for equality among genders. This study suggests that among all new faculty members, females are not as likely to receive communication from administration. Additionally, gender influences amount of support and training received and confidence in teaching. Although the numbers may be daunting, future studies could examine those same gender differences but in the context of all faculty members regardless of years of teaching experience.

Self-mentoring is a concept that was not explored in this study. While mentoring among peers and colleagues was an item related to training and support in this study, identifying the impact of self-mentoring opportunities could impact future recommendations. Specific differences in self-mentoring could also be examined in the years of 2020 and 2021 due to changes in work environments and an increase in virtual meetings rather than face-to-face meetings due to COVID-19.

Additional studies would be beneficial that present best practices of institutions that have established a successful department designed to assist in the training and development of new employees. The results of this study can contribute to the partial development of new faculty orientation necessities but building an entire department would require supplementary information that is beyond the scope of this research.

Recommendations for Practice

Based on the results of this study, higher education institutions should have a designated department for new faculty assistance. It is common practice for institutions to have a brief orientation meeting with newly hired faculty regardless of their previous years of teaching experiences. The problem with the basic faculty orientation session is that they all have varying levels of preparation and experiences leading up to that meeting. Topics covered in typical basic orientation sessions include necessary information regarding functions of the job, but there should be continual follow-up and engagement to support the individual training and developmental needs of faculty that can best be provided through the focused efforts of an entire department. Likewise, if there is already a new faculty support department present at the institution, it should be highly publicized and made available to new employees. Administrators within

individual colleges and departments should communicate new faculty services of the institution clearly to their new employees.

A second recommendation for practice is to ensure that higher education administrative leaders are aware of the current research indicating that gender-based differences are present among new faculty. With that information, administrators can perform a self-study to determine if inequalities are present in their units and ultimately implement effective interventions to combat differences. By implementing self-monitoring practices within their individual levels in the institution, gender differences can be identified and addressed.

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APPENDIX A

ROTATED COMPONENT MATRIX

Rotated Component Matrix

Item	Factors		
	1	2	3
Q19 I received sufficient training from my institution on how to assess student learning	.798		
Q18 I received sufficient training from my institution on syllabi development.	.772		
Q13 My institution provided structured support (training, resources, guidance) for teaching and learning during the first year of my employment as a new faculty member in higher education.	.765		
Q20 I received sufficient training from my institution on classroom facilitation	.763		
Q16 My workplace provided me the option of having a mentor or required me to have a mentor.	.624		.
Q25 Appropriate pedagogy (the art, science, or profession of teaching) or andragogy (the art or science of teaching adults) training was provided to me as a new faculty member.	.578		
Q30 My institution trained me on the use of technology (learning management systems, video conferencing, anti-cheating technology) that was required for my teaching.	.577		
Q31 My institution offered professional development opportunities specifically related to teaching.	.546		
Q28 I was informed about the typical classroom culture at my institution (late assignment policy, bonus point policy, attendance policy).		.866	
Q26 Administration provided me well-defined teaching expectations (load, level of learning, learning outcomes, learning experiences for students).		.780	
Q29 My institution trained me on how to handle difficult classroom situations (cheating, poor attendance, student failing grades).		.728	
Q27 The teaching expectations/goals that my institution gave me were periodically evaluated by administration.		.678	
Q23 I feel confident that I have the ability to teach an in-person course effectively.			.878
Q21 As someone who has taught in higher education for five years or less, I feel adequately prepared to teach content in my area of expertise.			.818
Q22 I feel confident that I have the ability to teach an online course effectively.			.816
Q24 I feel confident that I have the ability to teach a hybrid course effectively.			.783

Note: Second factor analysis, rotation converged in 5 iterations.
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

APPENDIX B

HUMAN USE APPROVAL LETTER

LOUISIANA TECH
UNIVERSITY

OFFICE OF SPONSORED PROJECTS **EXEMPTION MEMORANDUM**

TO: Ms. Amy Hogan and Dr. Bryan McCoy

FROM: Dr. Richard Kordal, Director of Intellectual Properties
rkordal@latech.edu

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: April 1, 2021

TITLE: "Bridging the Career Transitional Gap between Field Experts and University Instructors: Factors Affecting New Faculty Members' Feelings of Preparedness to Teaching in Higher Education"

NUMBER: HUC 21-084

According to the Code of Federal Regulations Title 45 Part 46, your research protocol is determined to be exempt from full review under the following exemption category(s):
46.104(a) (d) (1) ((2) (i) (ii).

(a) Unless otherwise required by law or by department or agency heads, research activities in which the only involvement of human subjects will be in one or more of the categories in paragraph (d) of this section are exempt from the requirements of this policy, except that such activities must comply with the requirements of this section and as specified in each category.

(d) Except as described in paragraph (a) of this section, the following categories of human subjects research are exempt from this policy:

(1) Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: