

**Higher Education Assessment Professionals' Professional Identity: Influences of
Leadership, Job Satisfaction, Work Motivation, and Professional Development**

A Dissertation Presented for the

Doctor of Philosophy

Degree

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DEDICATION

For Mom and Pappaw.

Your encouragement and support for my education made me see possibilities and inspired me to become a lifelong learner. I love and miss you every day. The last big step is done.

Promise kept.

Always continue with your education, Nik. That's the important thing. They can never take that away from you.

- Pappaw (J Vernon) Day, August 1997

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ABSTRACT

Assessment of student learning in higher education has existed systematically since the push for accountability from governing bodies in the 1980s (Banta & Palomba, 2015; Hundley, 2022; Nicholas & Slotnick, 2018), but the higher education assessment field did not start defining itself until recent years. This descriptive survey study assessed what influences Higher Education Assessment professionals' (HEAs) professional identity development by investigating the relationships between their professional identity, leadership, job satisfaction, work motivation, and investment in professional development. Using validated scales and open-ended questions, the results demonstrated that 80% of respondents identified with the profession, democratic leadership style characteristics were the most experienced by HEAs, respondents reported a moderate level of work motivation, and HEAs felt well supported overall by their institution and/or supervisor but were concerned about institutional limitations. A standard multiple regression also identified the democratic leadership style, job satisfaction, work motivation, and self-professional development investment as predictors of HEAs' professional identity.

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Chapter 1: Introduction

Chapter 1 illustrates the need for the higher education assessment field to understand the relationships more thoroughly between higher education assessment professionals' (HEAs') supervisor's leadership style, professional identity, job satisfaction, work motivation, and professional development investment. The chapter will address the following: 1) statement of the problem, 2) purpose of the study, 3) theoretical framework guiding the study, 4) significance of the study, 5) research questions, 6) terms and definitions, and 7) assumptions, limitations, and delimitations.

Statement of the Problem

Assessment of student learning in higher education has existed systematically since the push for accountability from governing bodies in the 1980s (Banta & Palomba, 2015; Hundley, 2022; Nicholas & Slotnick, 2018), but higher education assessment professionals did not start defining themselves until recently (Jankowski & Slotnick, 2015). Initial research started with learning how to involve faculty, work with institution leaders, and how to improve faculty assessment skills (Banta & Palomba, 2015; Horst & Prendergast, 2020). Jankowski and Slotnick (2015) provided a list of five essential roles for assessment practitioners (Visionary/Believer, Narrator/Translator, Political Navigator, Facilitator/Guide, and Assessment/Method Expert), and more recent research has refined and begun to expand the field's knowledge about perceptions of these roles, responsibilities, and skill sets needed for assessment professionals (Ariovich et al., 2018; Christen et al., 2023; Morrow et al., 2022). As a field that predominantly contains professionals from eclectic backgrounds and experiences (Ariovich et al., 2019; Jankowski

& Slotnick, 2015), it has struggled to create a clear path to define its professional identity in the role (Curtis et al., 2020).

As research has progressed, concepts from other fields have appeared in assessment research, such as using distributed leadership (shared leadership among supervisors and employees within their environment) as a viable perspective to frame research (Spillane et al., 2004; Hundley, 2022) and defining a professional identity (Curtis et al., 2020; Polychronopoulos & Clucas Leaderman, 2019; Prendergast et al., 2022). With the addition of this research, the field is continuing to evolve into a formal profession with a need to define its position within an institution (Jankowski & Slotnick, 2015; Nicholas & Slotnick, 2018; Prendergast et al., 2022). Unfortunately, this, and the ever-changing higher education environment, leads to professional “growing pains” as new and established assessment professionals attempt to find appropriate training and development and continually adjust their role (Curtis et al., 2020; Prendergast et al., 2022). HEAs are in a prime position to begin building an intentional definition of the field and attainable goals to move the field forward (Curtis et al., 2020).

Purpose of the Study

The purpose of the study was to assess what influences HEAs’ professional identity development by investigating the relationships among HEAs’ professional identity, leadership, job satisfaction, work motivation, and investment in professional development. Assessment literature discusses several of these concepts. However, there is little research using established scales and open-ended questions to obtain a comprehensive perspective of assessment professionals’ status regarding these variables. The current descriptive

survey research study drew upon Self-Determination Theory literature to help researchers gain an understanding of HEAs' perspectives and provide a baseline for future research in higher education, assessment, and professional development.

Theoretical Framework

The Self-Determination Theory (SDT) of motivation guided the study. The theory has been applied across a broad range of fields and states that employee work performance and growth are affected by motivation for their job activities (Deci et al., 2017). At its core, the SDT dictates that motivation is mediated by three basic psychological needs: competence, relatedness, and autonomy (Deci et al., 2017). An HEA's work environment and ability to have SDT needs met are directly affected by their supervisor's leadership style, or the relationship between the supervisor's interactions and behaviors with employees (Al Khajeh, 2018; Ryan & Deci, 2017; Kelly & MacDonald, 2016). White (1959) and Deci and Ryan (1985) defined competence as the experience and mastery gained through one's environment and learning exploration for effectiveness in activities. Relatedness is the desire to form interpersonal connections and establish belongingness (Baumeister & Leary, 1995; Deci & Ryan, 2017). Lastly, autonomy is defined as the need for choice and the power to change one's environment (de Charms, 1983; Deci & Ryan, 1985). These needs are impacted by multiple social settings and environments, including job activities, culture, and managerial styles in the workplace (Deci et al., 2017).

Significance of Study

HEAs are working towards understanding their professional roles, dispositions, skills, and identities within the field. Adding Self-Determination theory-driven data will

provide an essential foundation for the improvement and expansion of the academic and professional development resources available to HEAs. The study's results can be used to revise and streamline these resources to allow for more appropriate and diverse options for HEAs, affording them more choices in their selection. Also, SDT research suggests that fostering support for employees' autonomy promotes their satisfaction and overall organizational effectiveness and success (Deci et al., 2017). Surveying HEAs for feedback will give them ownership in their field and, ideally, provide autonomous motivation to perform better in their positions (Deci et al., 2017). Establishing an identity and knowledge base for the profession provides a forward movement toward field recognition, self-governance, and credentialing (Chappell et al., 2021; Hanna & Bemak, 1997).

Research Questions

The research questions guiding the descriptive survey research study include:

1. What are HEAs' perceptions of their professional identity, supervisor's leadership style, job satisfaction, work motivation, and investment in professional development?
2. Is there a significant relationship among HEAs' professional identity, perceived supervisor's leadership style, professional development investment, job satisfaction, and work motivation?

Assumptions, Delimitations, Limitations

Assumptions.

It was assumed that the participants' responses were honest and accurately represented HEAs' professional identity, supervisor leadership style, job satisfaction, work motivation, and investment in professional development.

Delimitations.

The study's data collection timeframe was in July and August when HEAs potentially travel for conferences and complete annual reports. Additionally, the survey was administered via email to HEAs through listservs, professional organizations, etc. The study focused on the professional identity, job satisfaction, supervisor leadership styles, work motivation, and professional development investment of HEAs.

Limitations.

There were potential limitations in the descriptive survey study. Self-report surveys have the potential to obtain problematic data, such as over- and underestimations and biases in responses (Robinson & Leonard, 2019). Response follow-up and clarification are not an option due to respondent anonymity. Also, in-depth responses like those provided in qualitative data collection methods, such as interviews or focus groups, were not available. Robinson and Leonard's (2019) purposeful survey design process was followed, and open-ended questions were included to mitigate these potential limitations.

Terms and Definitions

The following is a list of key terms and their definitions used in the study:

1. Autonomy–the need for choice and the power to change one’s environment (de Charms, 1983; Deci & Ryan, 1985).
2. Competence–the experience and mastery gained through one’s environment and learning exploration for effectiveness in activities (Deci et al., 2017; White, 1959).
3. Distributed Leadership–leadership “practice distributed over leaders, followers, and their situation” (Spillane et al., 2004, p. 11).
4. Job Satisfaction–“a positive (or negative) evaluative judgment one makes about one’s job or job situation” (Weiss, 2002, p. 175).
5. Leadership Styles–“the manner in which people are directed and motivated by a leader to achieve organizational goals” (Al Khajeh, 2018, p. 1).
6. Professional Development Investment–“the intention to participate in development activities for employability in the current function, as well as for changing functions or jobs within or outside the organization in which the worker is currently employed” (Renkema et al., 2009, p. 71).
7. Professional Identity–“the possession of a core set of values, beliefs, and assumptions about the unique characteristics of one’s selected profession that differentiates it from other professions” (Weinrach et al., 2001, p. 168).
8. Relatedness–the desire to form interpersonal relationships establishing belongingness (Baumeister & Leary, 1995; Deci et al., 2017).
9. Self-Determination Theory–the theory of motivation. It states motivation is mediated by three basic psychological needs: competence, relatedness, and autonomy (Deci et al., 2017; Deci & Ryan, 1985).

10. Work Motivation–“a set of energetic forces that originates both within as well as beyond an individual’s being, to initiate work-related behavior, and to determine its form, direction, intensity and duration” (Pinder & Dynan, 2008, p. 11).

Chapter Summary

Chapter 1 described the purpose of this descriptive survey research study: To investigate the relationships between HEAs’ professional identity, supervisor leadership style, job satisfaction, work motivation, and professional development investment. The study’s significance was noted and the theoretical framework guiding it. In addition to its assumptions, delimitations, and limitations, the study’s research questions were outlined. The next chapter details key literature on HEAs, professional identity, leadership styles, job satisfaction, work motivation, and professional development investment and how the current study aimed to provide information to close gaps in the HEAs’ body of literature.

Chapter 2: Literature Review

The descriptive survey research study focused on higher education assessment professionals' (HEAs') relationships among their perceived professional identity, supervisor's leadership styles, job satisfaction, work motivation, and professional development intent. The following chapter provides a review of the literature on these concepts. The review was conducted using the Google Scholar search engine; the University of Tennessee, Knoxville library's search engine, OneSearch; Academic Search Complete; APA PsycINFO; Business Source Complete; ERIC from EBSCO; and Gale Academic OneFile databases. Initial search terms and phrases included "professional development in assessment," "assessment leadership in higher education," "higher education job satisfaction," and "motivation in higher education." Follow-up searches focused on determining appropriate and validated scales to measure professional identity, supervisor's leadership styles, job satisfaction, work motivation, and professional development intent in a higher education environment. Various types of literature were retrieved in higher education, assessment, and other fields, including peer-reviewed articles, books, book chapters, and conference presentations.

Theoretical Framework

Self-Determination Theory

Self-Determination Theory (SDT) is a theory of motivation that focuses on how social factors advance or deter opportunities for humans to succeed (Ryan & Deci, 2017). The theory states there is a continuum of motivation, ranging from autonomous to controlled or intrinsic, extrinsic, and amotivation (Deci & Ryan, 1985; Ryan & Deci, 2017).

In the autonomous-controlled continuum, motivation is defined based on the amount of autonomous behavior (Deci & Ryan, 1985). Amotivation is the lack of intention to move forward due to the inability to attain outcomes or perceived meaningless in the actions (Deci & Ryan, 1985; Ryan & Deci, 2017). Extrinsic motivations are instrumental behaviors regulated for a consequence, such as a reward or similar valued outcome, and the level of control depends on the situation and individual interest (Deci et al., 2017; Deci & Ryan, 1985; Ryan & Deci, 2017). Intrinsic motivations are innately autonomous (de Charms, 1983) and refer to the motivation from the interest and enjoyment in the behavior (Deci et al., 2017; Ryan & Deci, 2017).

SDT research investigates how biological, social, and cultural conditions affect one's capacity for growth, engagement, and wellness through satisfying three psychological needs: competence, autonomy, and relatedness (Ryan & Deci, 2017). Competence has been widely researched in psychology and refers to one's desire to feel mastery and effectively function in life (Ryan & Deci, 2017). Autonomy is the "need to self-regulate one's experiences and actions" (p. 10), with an emphasis that the intent is self-endorsed and aligns with their interests (Ryan & Deci, 2017). Finally, feeling connected and belonging in a social situation is the primary characteristic of relatedness (Ryan & Deci, 2017). SDT research has demonstrated that social situations supporting these needs create an environment allowing humans to thrive and be productive (Ryan & Deci, 2017).

Study Constructs

Professional Identity

Professional identity as a construct has evolved over time, but it generally is viewed as possessing a set of values, beliefs, and assumptions of a profession that makes it unique from others (Emerson, 2010; Weinrach et al., 2001). Early research in professional identity included psychology's social identity theory (Brown et al., 1986) and was often utilized to demonstrate a profession's need to define itself (DeWeese III, 1970; Nixon, 1996). It progressed from social identity theory's concept of the attitudes and behaviors of one group to another is determined by the members' social identity to a group's relations in the workplace and their comparison to other professional groups (Adams et al., 2006; Brown et al., 1986). Many fields have continued this research extensively, connecting professional identity to improved mentoring (Dobrow et al., 2005; Kram, 1988), including how to ensure autonomy remains for their field (Nixon, 1996; Spaulding, 2003), and relationships with other job facets, such as job satisfaction, burnout, career success, and commitment (Canrinus et al., 2011; Mainous et al., 2018; Scanlan & Hazelton, 2019; Sharbaugh, 2009; Wilson et al., 2016). Professions requiring credentialing and licensing, such as teacher education, law, medicine, and behavioral counseling, have utilized professional identity research heavily to establish public recognition, self-governance, and setting competency standards (Canrinus et al., 2011; Chappell et al., 2021; Hanna & Bemak, 1997). Most fields have adjusted the concept of professional identity to apply to their specific values, but it has not always been a precise adaptation (Emerson, 2010). The definition of professional identity can vary significantly within professions, with some researchers focusing on the

creation of a professional identity, identifying their field's concepts in it, and reiterating how their professional identity is heard through professional stories (Beijaard et al., 2004; Emerson, 2010). In recent literature, researchers have illustrated that this dynamic construct can also change within an individual, creating a new professional identity (Chen & Reay, 2021). The concept is unstable and viewed as a personal journey, affected by situational factors (Kehm, 2013).

Professional identity research in higher education and with HEAs reflects the indecisiveness shown in other fields. While professional identity research received heavier attention in the late 1990s and early 2000's, higher education remained under-researched (Kehm, 2013). Nixon (1996) argued that situational changes in higher education would affect and potentially divide the field because all faculty are not allowed to voice their autonomy and construct their professional identity. Trede et al. (2012) reviewed 20 articles on higher education professional identity and stated no standard definition or theoretical base among them. Additionally, most measures for higher education professional identity are focused on students (Adams et al., 2006; Croxton, 2016; Matthews et al., 2019; Pittman & Foubert, 2016; Reinders et al., 2020; Tan et al., 2015; Worthington et al., 2013).

Complicated by eclectic academic backgrounds and institutional criticisms, HEA professional identities are emerging and evolving as assessment needs change at institutions (Clucas Leaderman & Polychronopoulos, 2019; Polychronopoulos & Clucas Leaderman, 2019; Prendergast et al., 2022). Prendergast et al. (2022) purposely interviewed six established assessment professionals on the state of the field, HEAs'

professional identity, and the relationships between HEAs and their institutions. The authors' discussions and participants' statements reflected previous research in higher education: differing thoughts on the definition of the field, the roles of HEAs, and how to use the diverse backgrounds of HEAs to collectively create a professional identity (Prendergast et al., 2022). While challenging the progress toward a cohesive professional identity, the authors and participants agreed that their eclectic backgrounds and experiences were positive and aided them in their positions (Prendergast et al., 2022). These studies have started the conversation for HEAs to work towards comprehensively defining the field's professional identity. These conversations will allow HEAs to move the profession forward and positively impact their relationship with institutional stakeholders and assessment processes (Caza & Creary, 2016; Emerson, 2010; Prendergast et al., 2022).

Leadership Styles

Leadership styles, the connections between a leader's behaviors and their interactions with subordinates, have been researched in many fields for decades (Al Khajeh, 2018; Kelly & MacDonald, 2016). Lewin, Lippit, and White (1939) analyzed different leadership styles with groups of children and determined three initial leadership styles: authoritarian, democratic, and laissez-faire. The authoritarian style is characterized by a leader's need for control, focusing on tasks, and subordinates' feedback is not considered in the decision-making process (Kelly & MacDonald, 2016; Lewin et al., 1939). Alternately, democratic leaders encourage group discussions for decisions and allocating tasks (Kelly & MacDonald, 2016; Lewin et al., 1939). In contrast to these styles, laissez-faire leaders are hands-off with subordinates, lack structure, and are absent in decision-making

processes (Kelly & MacDonald, 2016; Lewin et al., 1939). In their book, Gary Yukl (2002) described another leadership style where leaders are rule-followers, procedural in nature, and make decisions to pass down the hierarchy to subordinates: bureaucratic (Kelly & MacDonald, 2016). Descriptions of additional leadership styles, such as transactional and transformational, have been developed over time. Recent literature includes these styles for analyses, ethical considerations, etc., but scant studies include the authoritarian, democratic, laissez-faire, and bureaucratic leadership styles in higher education, especially in assessment (Fuller, 2019; Kasalak et al., 2022).

Job Satisfaction

Job satisfaction is an individual's positive or negative evaluation about their job or job situation (Weiss, 2002). The construct has been researched for over a century and has evolved along with society and job situations (Judge et al., 2017). Specifically in psychology, Judge et al. (2017) note that job satisfaction has changed as societal issues, job attitudes, etc., have furthered science's interpretation. Research methods have subsequently progressed, and the literature reflects the multiple measures available for its analysis. Job satisfaction research began with discussions about performance measures and emotions in the workplace, moved forward to outcomes of job attitudes, turnover, and performance, shifted to negative and positive factors affecting job attitudes, saw the creation of early interactional models containing intrinsic and extrinsic characteristics, and more recently behavioral concepts like organizational commitment along with more advanced statistical and theoretical models (Judge et al., 2017). This progression has provided several established measures in overall and facet job satisfaction, such as the Minnesota

Satisfaction Questionnaire (Weiss et al., 1967), Job in General Scale (Ironson et al., 1989), Job Satisfaction Survey (Spector, 1985), Generic Job Satisfaction Scale (MacDonald & MacIntyre, 1997), and Job Descriptive Index (Smith et al., 1969) among many others.

The measures have been applied to various fields and frequently included in comparative analyses. Meta-analyses and psychometric analysis studies have been conducted to continually compile, re-analyze, and update the established instruments as needed (van Saane et al., 2003). Additionally, revising to create shorter measures has been essential as technology has advanced, and respondents respond better to more concise surveys (Russell et al., 2016). Job satisfaction is often one construct in a multivariate analysis with other job, personality, or professional constructs (Judge et al., 2017). Solidarity, leadership styles, motivation, burnout, pay, professional identities, etc., have accompanied job satisfaction in holistic studies (Canrinus et al., 2011; Judge et al., 2017; Lawler & Hall, 1970; MacDonald et al., 2014; Scanlan & Hazelton, 2019). Like many studies on job satisfaction, higher education research has presented domestic and international perspectives but predominantly focused on specific populations, such as faculty and students, due to their impact on institutional operations (Alonderiene & Majauskaite, 2016; Ngirande, 2021). More research is needed to comprehensively view job satisfaction and its effects in higher education (Alonderiene & Majauskaite, 2016).

Work Motivation

While its research history has been eclectic, the definition of work motivation has consistently remained as the force from within and around oneself that initiates work behavior and determines how it is shaped and how long it lasts (Pinder & Dynan, 2008). In

its earliest form, work motivation was researched with basic connotations, such as rewarding good workers and punishing “bad” workers (Katzell & Thompson, 1990). Over the course of the 20th century, work motivation topics garnered heightened attention due to the lack of sufficient evidence for the successful integration of theories and concepts, resulting in ambiguity in terminology and frameworks (Katzell & Thompson, 1990; Lawler & Hall, 1970; Locke, 1991).

In the late 1980s and early 1990s, the research shifted to create a cohesive knowledge base of previous literature to use moving forward (Katzell & Thompson, 1990). During this time, measures started appearing in literature, such as the Work Preference Inventory, based on intrinsic and extrinsic motivations (Amabile et al., 1994; Deci et al., 2001). With most of the research being conducted in international but democratic countries, Deci et al. (2001) furthered the field by testing SDT and work motivation in a totalitarian country with collectivist values. Also, researchers from other fields began seeing the potential in integrating additional concepts with work motivation, including organizational commitment (Meyer et al., 2004). In addition to this work, education, healthcare, and sports professionals became heavily invested in SDT after researchers differentiated between the levels of autonomy in extrinsic motivation and began illustrating links to organizational behaviors (Gagné & Deci, 2005). In conjunction with Latham and Pinder’s summarization of work motivation research (2005), Gagné and Deci (2005) demonstrated the connections and relationships between several concepts in the field: goal-setting theory, action regulation theory, organizational commitment, Kanfer’s

task-specific motivation, job characteristics theory, and Kelman's theory of internalization and the concept of identification.

Gagné and Deci's research propelled the field forward and provided new opportunities in measure creation, notably the Work Extrinsic and Intrinsic Motivation Scale (WEIMS) (Tremblay et al., 2009) and the Motivation to Work Scale (Gagné et al., 2010). Further research and development led to the Multidimensional Work Motivation Scale (MWMS), assessing work motivation at the domain level instead of individual tasks within a job and has been translated and validated in nine languages (Gagné et al., 2014; Machado et al., 2018; Neves & Coimbra, 2018; Smokrović et al., 2018). Recent research demonstrates the necessary removal of certain items on the MWMS and recommendations for future research (Trépanier et al., 2022). With the additional tools available, researchers expanded the MWMS to include topics such as burnout, solidarity, person-organization fit, job engagement, stress, and emotional labor (Fernet et al., 2010; Kongcharoen et al., 2020; MacDonald et al., 2019; Scanlan & Hazelton, 2019; Shkoler & Kimura, 2020). The higher education field has produced little research in these areas within the last decade. At the international level, only the field's recent research has investigated work motivation with leadership, faculty, academic staff, job performance, and similar areas previously researched in other fields (Ahmed, 2011; Daumiller et al., 2020; Kallio & Kallio, 2014; Rahardja et al., 2018; Rawung, 2013; Rowley, 1996; Zlate & Cucui, 2015).

Professional Development Investment

Investment or intent has little research in the otherwise established knowledge base in professional development. While the definition varies greatly, the general concept of

professional development (PD) can be stated as the activities one participates in to attain knowledge and skills to utilize for improved work performance and opportunities, typically to further one's career or improve upon job performance (Joyce & Cowman, 2007; Renkema et al., 2009; Sankey & Machin, 2014). Without it, research has shown that there are increases in workplace issues such as burnout and turnover and decreases in key employee concepts such as job satisfaction (Allen et al., 2010; Özer & Beycioglu, 2010; Shuck et al., 2014; Wells, 2020). To remedy these threats to productivity and overall processes (Allen et al., 2010), professionals and researchers began investigating methods to assuage their effects, determine the effectiveness of PD options and content, and how to use PD to increase minority and underrepresented groups in leadership, especially in education and medicine where continuing education responds to ever-changing student or patient needs and outcomes (Guskey, 2000; Johnston, 1998; Joyce & Cowman, 2007; Muijs & Lindsay, 2008; Mullens et al., 1996; Soine & Lumpe, 2014). The results demonstrate a necessity to build a more thorough knowledge base in PD that addresses the SDT concepts of employee motivation, supported by autonomy in choices of PD, relatedness in participating as a team, and promotes leadership investment in employee competence (Allen et al., 2010; Hardré, 2012; Muijs & Lindsay, 2008; Özer & Beycioglu, 2010; Ransom, 2021; Sankey & Machin, 2014). Abakah (2023) took the research one step further and framed PD motivation as an "investment" based on Darwin and Norton's (2017) notion that it is a complementary concept to motivation. Understanding how to promote and measure employee investment in PD will be crucial to successful employee retention and well-being (Sankey & Machin, 2014; Wells, 2020).

Higher education and HEAs have endured similar issues and paths to discovering ways to improve PD quality and delivery despite increased expectations and fluid learning environments necessary for students (Brancato, 2003). Research indicated that faculty with more autonomy in their PD choices and obtaining competence are more successful teachers (Brancato, 2003). This proactive approach combined with collaboration/relatedness, professional identity, and competence has been shown as vital to achieving faculty personal and professional goals (Brancato, 2003; Hardré, 2012; Ovalle Quiroz & González, 2023; Sankey & Machin, 2014; Shagrir, 2017).

Recent research shows that HEAs sought out assessment PD for faculty to promote buy-in and interpersonal relationships with them, and refine what PD means for faculty and the assessment field (Hutchings, 2010). Ariovich et al. (2018) discussed HEAs attending conferences and webinars, reading journal articles, and using social media to obtain PD, discussed initial preferred delivery methods, and later (2019) the barriers many individuals experience when seeking PD. Christen et al. (2023) analyzed responses from over 200 HEAs to ascertain what types of training they had upon starting their position, what types of PD they sought since starting the position, and their perspectives on what has been missing in the field. While this research illustrates what has been compiled thus far, more information is needed to prepare a more holistic approach to provide sufficient PD opportunities and support for HEAs.

Constructs Summary

Professional identity is “the possession of a core set of values, beliefs, and assumptions about the unique characteristics of one’s selected profession that

differentiates it from other professions” (Weinrach et al., 2001, p. 168). Professions use it to create competency standards, promote self-governance, and establish public recognition (Canrinus et al., 2011; Chappell et al., 2021; Hanna & Bemak, 1997). It has been shown that one’s work environment and other job facets, such as the lack of satisfaction, autonomy, and belongingness, can be detrimental to professional identity and affect career success and commitment level (Canrinus et al., 2011; Mainous et al., 2018; Nixon, 1996; Ryan & Deci, 2017; Scanlan & Hazelton, 2019; Sharbaugh, 2009; Wilson et al., 2016). An HEA’s work environment and ability to have SDT needs met are directly affected by their supervisor’s leadership style, or the relationship between the supervisor’s interactions and behaviors with employees (Al Khajeh, 2018; Ryan & Deci, 2017; Kelly & MacDonald, 2016). Job satisfaction, or one’s positive or negative evaluation about their job or job situation, and work motivation, “a set of energetic forces that originates both within as well as beyond an individual’s being, to initiate work-related behavior, and to determine its form, direction, intensity and duration” (Pinder & Dynan, 2008, p. 11), have their relationships studied along with leadership styles, burnout, solidarity, etc. in various fields and have measures that were based upon SDT concepts (Canrinus et al., 2011; Judge et al., 2017; Lawler & Hall, 1970; MacDonald et al., 2014; Scanlan & Hazelton, 2019). As a complementary concept to motivation (Abakah, 2023; Darvin & Norton, 2017), professional identity investment, or “the intention to participate in development activities for employability in the current function, as well as for changing functions or jobs within or outside the organization in which the worker is currently employed” (Renkema et al., 2009, p. 71), has not been evaluated for HEAs. Feedback on the concept is needed from HEAs and will aid in directing

PD topics and promoting professional identity research in the field (Christen et al, 2023; Clucas Leaderman & Polychronopoulos, 2019; Morrow et al., 2022; Polychronopoulos & Clucas Leaderman, 2019). Together, these constructs will provide the assessment field with a baseline to drive future research.

Chapter Summary

Chapter 2 summarized the literature related to the constructs in this study. The chapter began with a literature review of the study's theoretical framework. Subsequent sections included descriptions of the constructs of professional identity, supervisor leadership styles, job satisfaction, work motivation, and professional development intention, their established literature, and gaps being addressed in this study, especially regarding higher education and assessment. A Constructs Summary was provided to concisely define and illustrate the constructs' relationships and necessity in the study. Chapter 3 describes the research design and methodology for the study in detail.

Chapter 3: Methodology

The following chapter describes the descriptive survey design used to research the relationships among higher education assessment professionals' HEAs' professional identity, supervisor leadership style, job satisfaction, work motivation, and professional development investment in a nationwide sample from the United States. The study addressed two research questions: 1) What are HEAs' perceptions of their supervisor's leadership style, professional identity, job satisfaction, work motivation, and investment in professional development? and 2) Is there a significant relationship among HEAs' professional identity, perceived supervisor's leadership style, professional development investment, job satisfaction, and work motivation? The research design and its rationale, population, sampling, and recruitment of participants are described, along with a data analysis plan for each research question.

Research Design

A descriptive survey research design was used for the study. This form of survey research included collecting data associated with attitudes, behaviors, and attributes to generalize its interpretations to a particular population (Coughlan et al., 2009; Robinson & Leonard, 2019). The current study sought to gather data on these aspects from HEAs in the United States to provide the assessment professional field a snapshot of their standings regarding professional identity, supervisor leadership styles, job satisfaction, work motivation, and professional development intent. A survey was selected as the method of data collection due to its ability to obtain a representative sample and generalizability of the results, in contrast to the more audience-selective, time-intensive methods of

interviews and focus groups (Creswell & Creswell, 2018; Robinson & Leonard, 2019). The anonymous online Qualtrics survey was cross-sectional with data collected at one point in time and contain closed and open-ended questions to obtain a holistic perspective to answer the research questions (Creswell & Creswell, 2018; Hackett, 1981).

An advantage of employing a survey for data collection is that it allows the researcher to obtain the necessary data that are unavailable in existing datasets while using limited resources and reaching a broader population (Robinson & Leonard, 2019). As a result, a survey provides a better opportunity to achieve a larger dataset for better analyses and the ability to generalize results to the HEA population (Robinson & Leonard, 2019). While these aspects encourage the use of surveys, potential issues such as nonresponse, survey fatigue, response bias, and survey error can be problematic in data collection and later analyses (Coughlan et al., 2009; Creswell & Creswell, 2018; Robinson & Leonard, 2019).

Sampling Methods and Recruitment

Study participants included a sample of HEAs from the United States. While the exact population of HEAs is unknown, over 5,000 can be accounted for in the national memberships of the Association for the Assessment of Learning in Higher Education (AALHE), the Assessment Institute of Indianapolis, and the Association for Institutional Research (AIR) alone, but the memberships potentially overlap (Assessment Institute, 2023; Association for Institutional Research, 2023; Association for the Assessment of Learning in Higher Education, 2023). Past HEA survey research has attained sample sizes from around 300 to over 1,000 participants from various assessment personnel and

institutions, after using non-probability purposive and snowball sampling methods (Ariovich et al., 2019; Morrow et al., 2022). Based upon these successes, the current study employed purposive and snowball sampling and recruitment methods during the late summer months, mid-July through the end of August, before the start of the fall semester for most HEAs. While these sampling methods allowed the survey to reach a more extensive set of potential participants more efficiently, they may limit the study's generalizability to the overall population if not all HEAs are 12-month employees, such as faculty that are 9-month contracts (Johnson & Christensen, 2017).

Purposive Sampling. This non-probability sampling method intentionally recruited participants from the HEA community for the study (Johnson & Christensen, 2017). A recruitment email (see Appendix A) from the Qualtrics platform was emailed to member listservs through AALHE, Student Affairs Assessment Leaders (SAAL), and other assessment organizations. Follow-up emails were sent at the 2-week mark after the initial email, also through the Qualtrics platform. For social media postings, the statement was not posted any more than two times in one month on Facebook, Twitter, Instagram, Threads, and LinkedIn platforms.

Snowball Sampling. This sampling method provided the survey additional exposure by asking other research participants to identify other participants and sharing the study's information and survey link with them (Johnson & Christensen, 2017). A recruitment flyer (see Appendix B) was attached to the previously mentioned recruitment email, along with a statement requesting participants to share it with potential HEA participants. Additionally, social media posts (see Appendix C) were made on Facebook,

LinkedIn, Twitter, etc., and tagged major assessment organizations and terms to promote the study.

Study Demographics

Demographic questions were included to describe the sample and provide additional data for analyses. Previous research has shown the diverse backgrounds of HEAs and the effects on HEA perceptions of their role and the field (Ariovich et al., 2018; Ariovich et al., 2019; Jankowski & Slotnick, 2015; Morrow et al., 2022). The survey respondents completed a demographic section containing 3 open-ended and 11 closed-ended questions. The questions responses produced 14 variables for analysis: 1) Respondent Job Title, 2) Respondent Supervisor Job Title, 3) Institution Category, 4) Minority-Serving Institution Status, 5) Type of Institution, 6) Size of Institution, 7) Size of Assessment Unit, 8) Assessment Percent in Role, 9) Percentage of Other Responsibilities if not Assessment, 10) Respondents' Highest Degree Earned, 11) Highest Degree's Field, 12) Gender, 13) Race, and 14) Ethnicity. Descriptive statistics for all the variables are listed in the following subsections, with "Prefer not to answer," "No response," and "Other" with no appropriate selection available accounting for any missing percentages. Additional information regarding these questions can be found in Chapter 4.

Respondent and Supervisor Job Title

The first two questions in the demographic section of the survey inquired on the respondent's and their supervisor's job titles. The questions were open-ended, and both sets of responses were coded into three titles: Professional, Director, and Administration. Responses for the "Professional" role that contained "analyst" and "specialist," the

“Director” role included cases such as “Director” or “Chair,” and the “Administration” role included responses such as “Vice Chancellor,” “Dean,” and “Provost.” The “Professional” category was set to missing for analysis purposes due to low responses. In the responses, 23% were Professionals, 59% were Directors, and the remaining 14% were Administration. For respondents’ immediate supervisors’ job titles, a 72% majority were noted as Administration, 23% were Directors, and Professionals were reported as the lowest percentage at only 1%.

Respondent Backgrounds

Respondents were asked to respond to 7 questions examining their backgrounds, including the size of their assessment office, the percentage of their role that is assessment, the highest degree they earned and what field it was in, gender, race, and ethnicity. The next question was regarding the size of the assessment unit and the question’s choices were 1) Small: 1-2 full-time employees, 2) Medium: 3-5 full-time employees, and 3) Large: 6+ full-time employees. It was noted to respondents that the full-time employees can be assessment professionals and other professionals (i.e., administrative, supervisors, support staff, etc.). More than half of respondents, 54%, advised their unit was “Small: 1-2 full-time employees,” 32% listed “Medium: 3-5 full-time employees” for their unit, and the remaining 10% selected “Large: 6+ full-time employees.” The follow-up question requested respondents to note if their role was 100% or not. If “Yes” was selected, the survey moved on to the next questions. However, if “No” was selected, the respondent was asked to divide their role’s percentage into categories (Administration, Advising, Assessment, Institutional Research, Teaching, and Other respectively) before moving on to the next question. Only

the first step in this question was used for analyses in this study, with 60% responding that their role was 100% assessment and 40% selecting that it was not. The individual percentages will be used in later studies.

Questions requesting the respondents' highest degree earned and their field of study were next on the survey. Respondents could choose from the following degrees: 1) Associate's Degree (e.g., A.A., A.S., A.A.S.), 2) Bachelor's (e.g., B.A., B.S.), 3) Master's (e.g., M.A., M.S.), 4) Education Specialist (Ed.S.), and 5) Doctorate or Professional Terminal Degree. Considering a majority of the respondents (59%) were directors, it was not surprising to see that 57% of the respondents had a doctorate or professional terminal degree. Master level respondents were second highest at 39% and the remaining 3% were at the bachelor level. The follow-up question of "In what field of study was your highest degree earned?" was open-ended and responses were coded into the following categories: 1) Social Sciences, 2) Humanities, 3) Natural Sciences, and 4) Business. The Social Sciences produced the most respondents at 77%, especially from the Psychology field. Humanities followed with 12%, with Natural Sciences (3%) and Business (6%) rounding out the responses.

The remaining background questions requested respondents to select their Gender, Race, and Ethnicity. The gender identity question provided these selections for the respondents: 1) Man, 2) Woman, 3) Non-binary. The results were overwhelmingly "Woman" with 75%, followed by "Man" with 22%, and "Non-binary" with 1%. This distribution is similar to past HEA research (Singer-Freeman & Robinson, 2020). The 3 "Non-binary" responses were coded as missing due to a very low response rate and not

included in this specific analysis at this time. Next, respondents were asked to list their race(s) with the options of 1) Alaskan Native, 2) Asian, 3) Black or African American, 4) Native American or Indigenous Tribe, 5) Native Hawaiian or Other Pacific Islander, and 6) White. Three respondents selected more than one race, so a new code (“Two or More Races”) was created to encompass them. Unsurprisingly, 86% of the respondents were White, followed by 5% Black or African American, 4% Asian, and 1% each for Two or More Races and Native American/Member of an Indigenous Tribe. The last background question asked respondents if they considered themselves to be Hispanic/Latino. A majority, 93%, replied “No” and 5% replied “Yes.”

Respondent Institution

Respondents completed four close-ended questions about their institution. The first question inquired about the level of institution with the options of 1) <2-year/Career and Technical, 2) 2-year/Community College, and 3) 4-year university/college. A sizable amount, 86% were from 4-year universities/colleges. The remaining 14% encompassed the 2-year community or technical colleges after their responses were combined due to low responses.

The next question asked if the respondents’ institution was a minority-serving institution with the options of 1) No, it is a Primary White Institution (PWI), 2) Yes, it is an Asian American and Pacific Islander Serving Institution (AAPISI), 3) Yes, it is a Hispanic-Serving Institution (HIS) 4) Yes, it is a Historically Black College or University (HBCU), and 5) Yes, it is a Tribal College or University (TCU). For the purposes of this study and low responses, the responses for all non-PWI options were re-coded into a “Yes, it is a Minority

Serving Institution (MSI)” variable. This provided a 63% selection rate for “No, it is a Primary White Institution” and 25% for “Yes, it is a Minority Serving Institution (MSI).”

The institution type contained three primary answers for respondents to choose from: 1) Private For-profit, 2) Private Nonprofit, 3) Public. Public institutions were the most common selection with 64%, followed by Private Nonprofit with 32%, and Private For-profit with 4%. Respondents then selected the size of their institution from 1) Very Small: <1,000 students, 2) Small: 1,000-4,999 students, 3) Medium: 5,000-9,999 students, 4) Large: 10,000-19,999 students, 5) Very large: 20,000+ students. Due to low responses, “Very Small” and “Small” responses were re-coded into a “Small: <4,999 students” option. This allowed a breakdown of “Very large: 20,000+ students” with 37%, “Small: <4,999 students” with 26%, “Large: 10,000-19,999 students” with 20%, and “Medium: 5,000-9,999 students” with the remaining 15%.

Measures

Professional Identity

Adams et al. (2006) developed a professional identity measure to investigate the construct among early Health and Social Care students in interprofessional education programs at two universities in the United Kingdom. As professional identity measures are typically tailored to specific fields, the measure was based on Brown’s (1986) 10-item group identification scale and adapted to apply to broader contexts in professional identity. Adams et al. (2006) distributed the survey to 1430 undergraduate Health and Social Care students and obtained 1254 responses, an 88% response rate. An Exploratory Factor Analysis employing a Principal Components Analysis with varimax rotation was conducted

to determine its potential as a unidimensional scale for research (Adams et al., 2006). Using Cattell's Scree test (1966) as the determining guide for the plot of eigenvalues, the scale was reduced to 9 items. Adams et al. (2006) then added a 5-point Likert-type ratings of "Strongly Disagree" (1), "Disagree" (2), "Neither Agree nor Disagree" (3), "Agree" (4), and "Strongly Agree" (5), due to the scree plots' reviews and low factor analysis loadings (Adams et al., 2006). The scale includes items such as "I feel like I am a member of this profession" and "Being a member of this profession is important to me." The scale achieved a high internal reliability Cronbach's Alpha score of .79. The current study changed two instances of the word "studying" to "working" in the scale, one item was removed based on expert reviewer feedback ("I am pleased to belong to this profession") and two open-ended were added questions asking what it means for one to have a professional identity as an HEA and what do participants think has influenced their professional identity as an HEA. The overall Professional Identity scale produced a high Cronbach's alpha of .84 in the current study. After

Supervisor Leadership Styles

Supervisor leadership styles were collected with Kelly and MacDonald's Supervisor Leadership Styles 4-item qualitative descriptions measure. The measure was created due to the nonexistence of a measure containing one of the four leadership styles, bureaucratic, and using the category descriptions aids in keeping the length of the overall survey shorter (Kelly & MacDonald, 2016). In Kelly and MacDonald's pilot of the items before their 2016 study, the authoritarian, democratic, and laissez-faire descriptions from Northouse (2012) were adapted to allow participants to make selections informed by their supervisor's

behavior and not their own. The pilot illustrated a complete alignment among these three styles and the measurement results, but bureaucratic selections did not fully align with the three styles. The final four items from Kelly and MacDonald's research (2016) are:

- Authoritarian: My supervisor makes most decisions without group discussion, communicates with subordinates mostly to convey directions, and is very focused on tasks.
- Democratic: My supervisor encourages subordinate input in decisions, tries to be a leader, and engages in communication with his/her subordinates.
- Laissez-faire: My supervisor is hands-off, leaving decision making and problem-solving power to the subordinates.
- Bureaucratic: My supervisor leads entirely by the rules, relies on regulations, and is impersonal with subordinates.

These categories' descriptive characteristics were broken down into 11 items for the current study's survey:

1. Communicates with their employees mostly to convey directions
2. Encourages their employees' input in decisions
3. Engages in communication with their employees
4. Is hands-off
5. Is impersonal with their employees
6. Is very focused on tasks
7. Leads entirely by the rules
8. Leaves decision-making and problem-solving power to their employees

9. Makes most decisions without group discussion
10. Relies on regulations
11. Tries to be a leader

For consistency in the survey, the items were assigned a 5-point Likert-type rating scale of “Never True” (1), “Rarely True” (2), “Sometimes True” (3), “Often True” (4), and “Always True” (5). Also, based on expert review feedback, the word “subordinate(s)” was replaced with “employee(s).” The items were recoded into 4 variables again for analyses, Leadership – Authoritarian, Leadership – Democratic, Leadership – Laissez-faire, and Leadership – Bureaucratic. See Table 1 to review each variable’s items and their moderate to high internal reliability from the Cronbach’s Alphas tests found in this study. For additional context in this study, an open-ended question requesting any further information about the participants’ immediate supervisor’s leadership style was added.

Job Satisfaction

The Minnesota Satisfaction Questionnaire for job satisfaction was developed in the Work Adjustment Project grant and designed to test the Theory of Work Adjustment, including how satisfaction affects vocational needs and abilities (Weiss et al., 1967). Experimental items, the Hoppock Job Satisfaction Blank, and the Employee Attitude Scale with Likert-type ratings totaling 80 items were originally used to measure job satisfaction, but it was time-consuming to score (Weiss et al., 1967). These items did not represent both intrinsic and extrinsic aspects and new “long” and “short” forms were derived from them (Weiss et al., 1967). The Manual for the questionnaire (1967) noted these two versions were created: a 21-scale long form and a 3-scale short form.

Table 1*Leadership Variables, Items, and Internal Reliability*

Variable	Items	Cronbach's Alpha
Leadership – Authoritarian	1. Communicates with their employees mostly to convey directions	.50
	6. Is very focused on tasks	
	9. Makes most decisions without group discussion	
Leadership – Democratic	2. Encourages their employees' input in decisions	.78
	3. Engages in communication with their employees	
	11. Tries to be a leader	
Leadership –Laissez-faire	4. Is hands off	.43
	8. Leaves decision-making and problem-solving power to their employees	
Leadership – Bureaucratic	5. Is impersonal with their employees	.51
	7. Leads entirely by the rules	
	10. Relies on regulations	

For a less cumbersome survey, the 3-scale short form containing 20 items, with 5-point Likert-type ratings of “Very Dissatisfied” (1), “Dissatisfied” (2), “Neither Satisfied nor Dissatisfied” (3), “Satisfied” (4), and “Very Satisfied” (5), was used in the current study. The form’s stem for participants is “On my present job, this is how I feel about...” with items such as “The chance to work alone” and “The chances for advancement on this job.” The form was tested with 1,460 employed men in assembler and engineering groups and obtained high Hoyt reliability coefficients of .87 and .92 respectively for each group (Weiss et al., 1967). In subsequent research, the form has presented high reliability coefficient alphas from .85 to .91 (Fields, 2002). Weiss et al. (1967) also list moderate to high test-retest scores of .66 to .91 for all scales at a one-week interval. However, the scores dropped to low and moderate scores of .35 to .71 for all scales after one year (Weiss et al., 1967). The scale’s Cronbach alpha score was determined as .90 in the current study. The short form’s validity was inferred from the long form’s, including construct validity from studies about the Theory of Work Adjustment as a dependent variable alongside the Minnesota Importance Questionnaire (MIQ) as independent variables in multivariate analyses and concurrent validity between groups (Weiss et al., 1967). One open-ended question was added to job satisfaction for this study to gain more participant feedback about their job satisfaction.

Work Motivation

The Work Extrinsic and Intrinsic Motivation Scale (WEIMS) measure was used to assess HEA work motivation. The WEIMS measure was created in response to and based upon the 31-item French Blais Inventory of Work Motivation (BIWM) because it was the

first tool to assess SDT and motivation in a work environment (Tremblay et al., 2009). In response to research illustrating the connections between work motivation and concepts such as job performance, turnover intentions, etc. Tremblay et al. (2009) saw the need to create an English work motivation tool. The WEIMS's 18-item scale, with 7-point Likert-type ratings "Does Not Correspond at All" (1), "Corresponds Moderately" (4), and "Corresponds Exactly" (7), was derived from the top three items of each of the six SDT constructs in the BIWM after translation (Tremblay et al., 2009). The scale asks participants, "Why do you do your work?" and then prompts them to respond to items such as "Because this is the type of work I chose to do to attain a certain lifestyle," "Because this job is a part of my life," and "Because I want to be very good at this work, otherwise I would be very disappointed." An EFA was conducted on responses from 100 women and nine men, and all items had loadings greater than the minimal .30 to confirm the measure as an alternative to the BIVM and in English (Tremblay et al., 2009).

Tremblay et al. (2009) then conducted analyses with 465 military personnel and 192 civilians (657 total) in Canada to confirm the scale's factors and applicability to multiple work environments. Construct validity was established with a CFA on all 18 items with the maximum likelihood estimation, with factor loadings between .30 and .93 and medium-high correlations above .50 (Tremblay et al., 2009). Internal consistency was demonstrated with moderate to high alphas between .64 and .83, similar to those on the BIVM (Tremblay et al., 2009). Criterion validity was established through correlation analyses of the SDT motivation types in the scale with other measured concepts, such as job satisfaction, organizational commitment, and work strain (Tremblay et al., 2009).

Organizational support and work environment positively correlated with four of the five SDT items with low-moderate r s between .24 and .41, $p < .01$, and negatively correlated with amotivation ($r = -.23$ and $-.25$, $p < .01$) (Tremblay et al., 2009). Job satisfaction and organization commitment correlated similarly with work SDT motivation items on the scale, with low-moderate r s ranging from .40 and .46, $p < .01$, for job satisfaction and commitment demonstrating low-moderate r s between .32 and .41 (Tremblay et al., 2009). The current study updated the scale to include a 5-point Likert-type ratings of “Strongly Disagree” (1), “Disagree” (2), “Neither Agree nor Disagree” (3), “Agree” (4), and “Strongly Agree” (5) for more consistency across the scales and the measure produced an alpha of .80. One open-ended question requesting participants to provide additional feedback about their work motivation was also added.

Professional Development Investment

The author created a measure with 13 items based on prior literature (Fontana et al., 2015; Joyce et al, 2007; Mourão et al., 2014, Mourão et al., 2022) to assess participants’ intent to engage in professional development:

1. I invest time in my professional development.
2. I invest my own money in my professional development.
3. My immediate supervisor invests time in my professional development.
4. My immediate supervisor invests money in my professional development.
5. I invest in other resources (e.g., educational materials, technology, professional memberships) for my professional development.

6. My immediate supervisor invests in other resources (e.g., educational materials, technology, professional memberships) for my professional development.
7. My immediate supervisor is supportive of my professional development.
8. My institution is supportive of my professional development.
9. Focusing on my professional development is important to me.
10. Focusing on my professional development is important to my immediate supervisor.
11. My institution invests resources for my professional development.
12. Other assessment colleagues at my institution are supportive of my professional development.
13. My organization offers professional development opportunities to enhance my skills.

This measure was included with 5-point Likert-type ratings of “Strongly Disagree” (1), “Disagree” (2), “Neither Agree nor Disagree” (3), “Agree” (4), and “Strongly Agree” (5). The current study conducted an EFA that displayed two components from these items (see Chapter 4), with all items loading from .504 to .831. The new variables, Professional Development Investment – Self and Professional Development Investment – Other, scored alphas of a moderate .66 and high .89 respectively. An open-ended question was added to request additional participant feedback on their level of professional development investment.

Procedure

The anonymous online survey was created in Qualtrics, allowing participants to complete the form on their smartphone if necessary. After IRB approval, an email containing a link to the survey (see Appendix A) was sent to 3-5 higher education professionals with assessment and survey experience to beta test the form. Once complete, the email, recruitment flyer with QR code (see Appendix B), and social media statement (see Appendix C) were distributed to listserv subscribers and posted on social media platforms. The email and flyer contained the study's purpose, description, participant eligibility, how to participate, and primary contacts. The QR code allowed smartphone users easier access to the same study information.

Data Analyses

Quantitative and qualitative data analysis procedures were conducted to analyze the survey data. The Qualtrics survey data was downloaded into an Excel spreadsheet for easy organization and uploaded to SPSS later for analysis. Data cleaning procedures were conducted according to Morrow and Skolits' (2017) guidelines prior to starting data analysis. Descriptive statistics were used to confirm the data-cleaning process results and summarize the data (Gravetter & Wallnau, 2017; Johnson & Christensen, 2017). A description of the data-cleaning process is detailed in Chapter 4.

Research Question 1: What are HEAs' perceptions of their supervisor's leadership style, professional identity, job satisfaction, work motivation, and investment in professional development?

Quantitative statistics were performed on the survey's closed-ended questions and each construct's measures to address Research Question 1. Descriptive statistics analyses (e.g., frequencies) were conducted to attain HEAs' overall perceptions (Gravetter & Wallnau, 2017). Additional descriptive and group difference statistics, such as *t*-tests and ANOVAs, were conducted to determine any differences in specific participant groups (e.g., assessment unit size; professional vs director; 2-year vs 4-year; institution size - Very Small: < 1,000 students, Small: 1,000 – 4,999 students, etc.) as sample sizes permit (Gravetter & Wallnau, 2017).

Qualitative analyses were completed to provide additional context to the quantitative findings and provide a comprehensive approach to address Research Question 1. Braun and Clarke's (2006) six-step analysis process was conducted on the survey's open-ended questions, addressing Research Question 1. The process' semantic thematic analysis approach was used to retrieve repeated response patterns (Braun & Clarke, 2006). Excel spreadsheets were used to review the responses. Each question was assigned a tab and it included only that question's responses. After reading the responses multiple times, *in vivo* coding to prioritize the participants' voices was conducted in the first round of coding (Braun & Clarke, 2006; Saldana, 2016). Pattern coding refined the codes and made themes easier to recognize (Braun & Clarke, 2006; Saldana, 2016). Both sets of codes were put in tables on each question's tab and used to determine its themes (Braun & Clarke, 2006).

After the initial quantitative and qualitative analysis processes were completed, an additional review of the results was conducted to fully address Research Question 1. While each analysis method provided unique insights into the data, reviewing both concurrently illustrated a holistic view of the results (Creswell, 2014). Checking the data and results from multiple sources, or triangulation, produced additional context to the quantitative analyses and further justification for the qualitative themes (Alkin & Vo, 2017; Creswell & Creswell, 2018). Employing triangulation allowed for a comprehensive investigation of Research Question 1 and can be reviewed in the integrated summary (Creswell, 2014).

Research Question 2: Is there a significant relationship among HEAs' professional identity, perceived supervisor's leadership style, professional development investment, job satisfaction, and work motivation?

Quantitative analyses were conducted to address Research Question 2. In addition to descriptive statistics, Pearson correlations were used to assess the significance and direction of the relationships among the study constructs (Gravetter & Wallnau, 2017). Further, a standard multiple regression analysis was completed to investigate if job satisfaction, supervisor leadership style, work motivation, and professional development investment (independent variables) were significant predictors of HEAs' level of professional identity (dependent variable) (Tabachnick & Fidell, 2014).

Data Analysis Plan

After the data analyses were completed for both research questions, the data were visualized with Excel charts and Word tables. In addition to descriptive statistics, samples

of participant statements and extracted themes were noted in frequency counts. Table 2 illustrates the analysis plan used for the study.

Chapter Summary

Chapter 3 described the research methodology used to answer the study's research questions. Along with the research design and its rationale, the study's sampling and recruitment plans were outlined. The reliability and validity of the measures compiled to create the study's anonymous online Qualtrics survey data collection was detailed. Finally, the chapter defined the study's data analysis plan.

Table 2*Data Analysis Plan*

Research Question	Data Analysis	Survey Questions	Data Visualization
1. What are HEAs' perceptions of their supervisor's leadership style, professional identity, job satisfaction, work motivation, and investment in professional development?	<ul style="list-style-type: none"> • Frequency counts • Group difference analyses as sample size permits • Thematic analysis of qualitative data 	Q1-Q26	Graphic or table illustrating percentages/counts, group differences, and themes
2. Is there a significant relationship between HEAs' professional identity, perceived supervisor's leadership style, professional development investment, job satisfaction, and work motivation?	<ul style="list-style-type: none"> • Frequency counts • Reliability analyses (Cronbach's Alpha) on measures • Pearson correlations analysis • Standard multiple regression analysis • Exploratory Factor Analysis Professional Development Investment measures 	Q1, Q4, Q6, Q8, Q10	Graphic or table illustrating percentages/counts, correlations, standard multiple regression, EFA, and Cronbach's Alpha results

Chapter 4: Findings

Chapter 4 contains the findings of the descriptive survey research study designed to investigate the perceptions of HEAs professional identity, supervisor's leadership style, job satisfaction, work motivation, and professional development investment. It contains five sections illustrating the results from the anonymous online survey completed by 250 HEAs. The first section outlines the data cleaning steps taken to prepare the data for analysis. The second section illustrates the demographics of the respondents in more detail. The third and fourth sections focus on the data analyses for each of the research questions listed below. The final section summarizes the overall findings from the data analysis.

1. What are HEAs' perceptions of their professional identity, supervisor's leadership style, job satisfaction, work motivation, and investment in professional development?
2. Is there a significant relationship between HEAs' professional identity, perceived supervisor's leadership style, professional development investment, job satisfaction, and work motivation?

Data Cleaning and Analysis Preparation

After the survey was closed in Qualtrics, the data were exported to an Excel spreadsheet for data cleaning. Sixteen of the 26 questions were closed-ended and their responses were reviewed using Morrow and Skolits (2017) data cleaning steps for their completeness and potential errors in Excel. Upon review, there were no outliers for any of the closed-ended responses. Additionally, the missing data were minimal, ranging from 0% to 4.6% on a majority of items. and no cases were removed. Only one item on the

Professional Development Investment scale, “Other assessment colleagues at my institution are supportive of my professional development,” had more than 5% of missing data, with a total of 31 cases or 12.4%. There was not a “Does not apply” option on this item, and this may have contributed to its increased missing data. All missing data cases were excluded from analyses.

The demographics responses were modified as needed for the data analysis. All closed-ended questions in the section had cases with “Prefer not to answer,” “Other,” “Not Listed,” or no response at all. These cases were re-coded as missing or to the appropriate answer, where possible, from the “Other” and “Not listed” responses. Seven other questions had responses coded or collapsed. In the open-ended response questions of “What is your primary job title in your current role?” and “What is the job title of your immediate supervisor?”, responses were re-coded into the roles of “Professional,” “Director,” and “Administration” to create new variables for analysis. In this process, responses with roles that contained “analyst,” “specialist,” and “coordinator” were sorted into the “Professional” role, cases such as “Director” or “Chair” were re-coded into “Director,” and the “Administration” role included responses such as “Vice Chancellor,” “Dean,” and “Provost.” The “Professional” category was set to missing and not used for analysis purposes due to low responses. Similarly, the questions regarding the field in which the respondents’ highest degree obtained were re-coded into the following options: Social Sciences, Humanities, Natural Sciences, and Business. “Social Sciences” included responses such as “Psychology,” “Sociology,” “Humanities” reported were responses like “History,” “English,” etc., “Natural Sciences” were fields such as “Biology,” “Chemistry,” and “Business” included

“Business Management” and “Business Administration” responses. For the question requesting their selection of the type of institution the respondents work for, the 2-year community college and <2-year career and technical responses were re-coded into “Community College and Technical School” due to low responses. The next question asked if the respondents’ institution was minority-serving, such as “Historically Black College or University (HBCU), or a Primary White Institution (PWI). Due to lower responses for the minority-serving institutions, all were re-coded into “Yes, it is a Minority Serving Institution (MSI).” Following this, the question regarding the size of the respondents’ institution contained low responses for “Very Small: <1,000 students” and “Small: 1,000-4,999 students.” These cases were re-coded into “Small: <4,999 students.” In review of the Gender questions, only 3 respondents selected “Non-binary” and these were re-coded as missing for inferential analysis purposes. Finally, the respondents that selected more than one race were recoded into “Two or More Races.” However, this category, “Native Alaskan,” “Native American/Member of Indigenous Tribe,” and “Native Hawaiian or Other Pacific Islander” categories were set to missing for further analyses due to low responses.

Several variables were re-coded or had new variables created for the data analysis process. First, three items on the Professional Identity scale were reversed coded. The items “I am often ashamed to admit that I am working in this profession,” “I find myself making excuses for belonging to this profession,” and “I try to hide that I am working to be part of this profession” were negatively worded compared to the remainder of the items on the scale. The responses for the Supervisor’s Leadership Style scale were re-coded into four subscales, one for each style: authoritarian, democratic, laissez-fair, and bureaucratic (see

Table 1). These four subscales were created from the respondent means on each scale prior to conducting data analysis. Lastly, two variables emerged from the Professional Development Investment EFA analysis in the study: Professional Development Investment – Self and Professional Development – Other. These variables were used for the data analysis process.

Following the data cleaning process, the responses were analyzed in SPSS or Excel. The closed-ended data, including the new and revised variables, were transferred to a new workbook and imported into SPSS 29 for further analysis, including descriptive statistics and frequencies to ensure the data cleaning process was complete. The remaining 7 open-ended responses remained in the original Excel workbook but were separated out into individual spreadsheets, one question per tab. Following Braun and Clark's (2006) analysis process, a thematic analysis of the qualitative responses to these questions was conducted. After reading through the responses several times, columns for the first round of themes were coded using *in vivo* coding to prioritize the participants' voices (Braun & Clarke, 2006; Saldana, 2016). Pattern coding was then employed to refine the codes and present clearer themes (Braun & Clarke, 2006; Saldana, 2016) in additional columns. A pivot table of these columns was created to view the frequency of these codes and determine overall, common themes (Braun & Clarke, 2006).

Research Question 1: What are HEAs' perceptions of their supervisor's leadership style, professional identity, job satisfaction, work motivation, and investment in professional development?

Qualitative Analysis.

Seven open-ended questions were added to the survey: 2 after the Professional Identity measure, 1 after the Leadership Styles, Job Satisfaction, Work Motivation, and Professional Development Investment measures, and 1 overall feedback question at the end. The questions were not required, therefore not all respondents completed them. Each section, its relevant question(s), and thematic analyses are listed below.

Professional Identity.

What does it mean to you to have a professional identity as a higher education assessment professional? The first question inquired on respondents' perspectives on what it means to have a professional identity as an HEA. Of the 250 respondents, 160 provided responses to the question. The prominent themes that emerged from the responses were that they have a positive impact on students, faculty, and the institution, work within assessment but do not identify as an assessment professional, state professional networking is essential for the field, value continuous improvement, feel their work and role is valued at their institution and in the field, have a disposition of confident, problem-solving, and dignity, are very data-driven to provide evidence in key decision-making, and feel that methodological skills are essential and valued.

HEAs stated they enjoyed the "opportunity to invest in student lives" by "working directly (and positively) impact[ing] faculty, administrators, and most of all, students." In

contrast to the high professional identity measure mean, several HEAs noted that this was only “part of their identity” and “too narrow and constructed” because other roles contribute to their overall professional identity. Also, professional networking was seen as essential to creating and maintaining HEAs professional identity. They stated that the chance to “learn from /with colleagues at other institutions” that “values continuous improvement” and having “people who do the same work as you” brings a “sense of comfort” in the work. This provides the sense that HEAs are “committed to advancing the profession, supporting others who may be interested in or new to the profession, and [are] engaged in service through professional organizations related to assessment.” They feel that “there is integrity in the role by assisting in quality assurance efforts to help ensure the best learning environment.” Furthermore, HEAs advised they do this by “problem-solving, decipher[ing] new information, and tell[ing] a story.” Figure 1 notes the number of responses containing these themes and Appendix F lists these plus response examples.

When you think of your professional identity as a higher education assessment professional, what stands out to you as important or influential in forming that

identity? The second question inquired on respondents’ perspectives on what has been influential or important in forming their professional identity as an HEA. Of the 250 respondents, 156 provided responses to the question. The prominent themes that emerged centered around the methodological skillsets they either had or have obtained since starting the profession and the professional networks they have joined. HEAs stated either supervisors noticed they “had a natural ability to analyze and organize thoughts and systems of others” or they came in with “training explicitly in methodology” that allowed

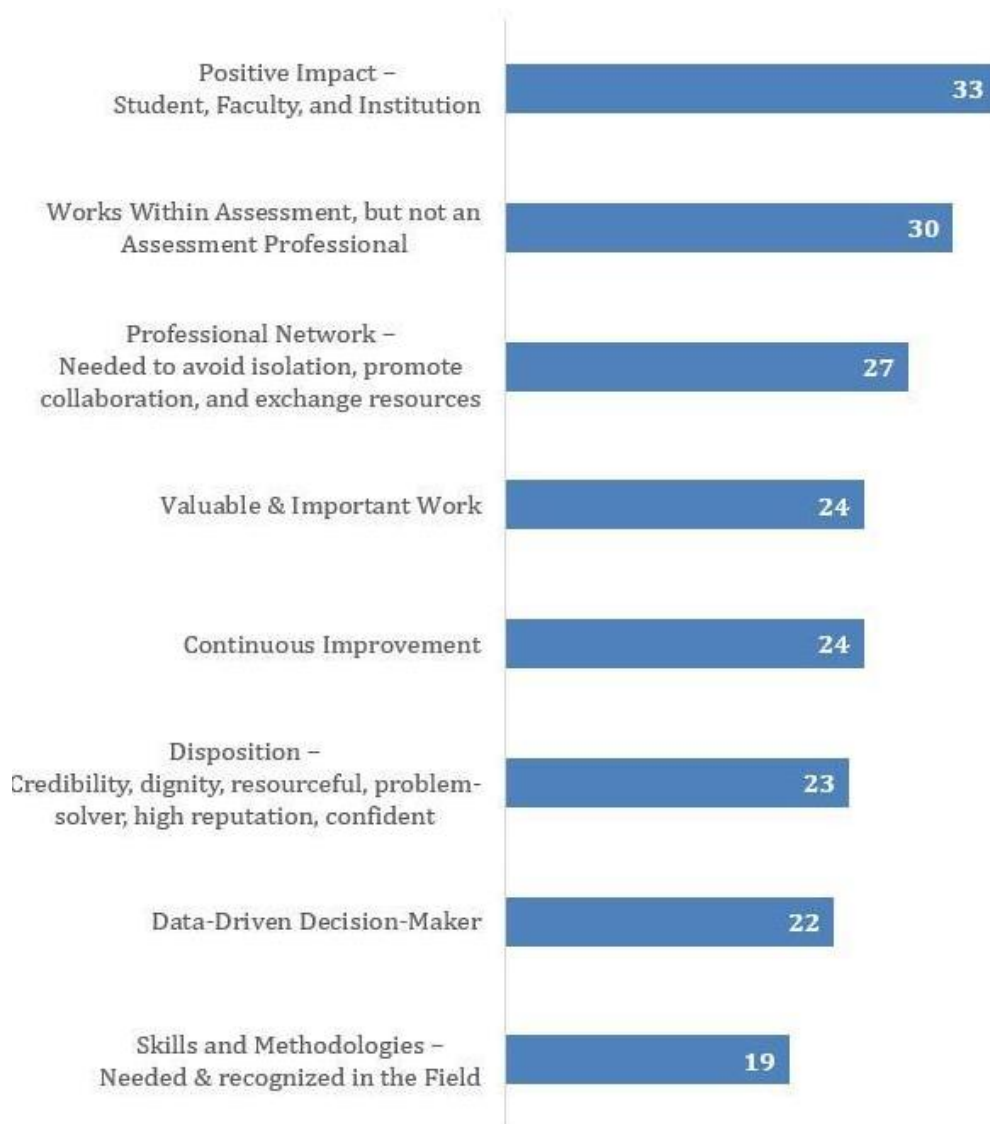


Figure 1

What Does It Mean to You to Have a Professional Identity Top Themes

them to “interpret and present data and feel like [they] have solidified assessment as part of [their] professional strengths.” In addition, they stated their professional identity had been built “primarily through interactions with others in the assessment field” because those in the field “value and encourage their thinking and work.” These themes appeared to provide the most influence in shaping the HEAs’ professional identity. Additionally, it was apparent in the responses that an HEA’s disposition, such as being inquisitive, confident, curious, and credible, was key in forming their professional identity. Respondents advised they saw these characteristics in themselves, such as “having confidence in data management and analysis,” and understood that it assisted in their work. HEAs also felt that supporting their higher education community, students, faculty, and institution and their “drive for data-informed decision-making for continuous improvements” supported their identity as an assessment professional in the higher education community. Finally, HEAs felt that interpersonal communication, namely building relationship “bridges” and being a “connector” “between disciplines, faculty, and administration, sectors of higher education, and academic and other institutional units” allows them to be more immersed in the field and that it aids in creating their professional identity. Figure 2 notes the number of responses containing the top themes and Appendix G lists these plus response examples.

Leadership Styles.

Is there anything else that you would like to tell us about your immediate supervisor's leadership style? (e.g., what do you like/dislike about your immediate supervisor's leadership style). The next question inquired about respondents’ additional comments or feedback about their immediate supervisor’s leadership style. Of the 250

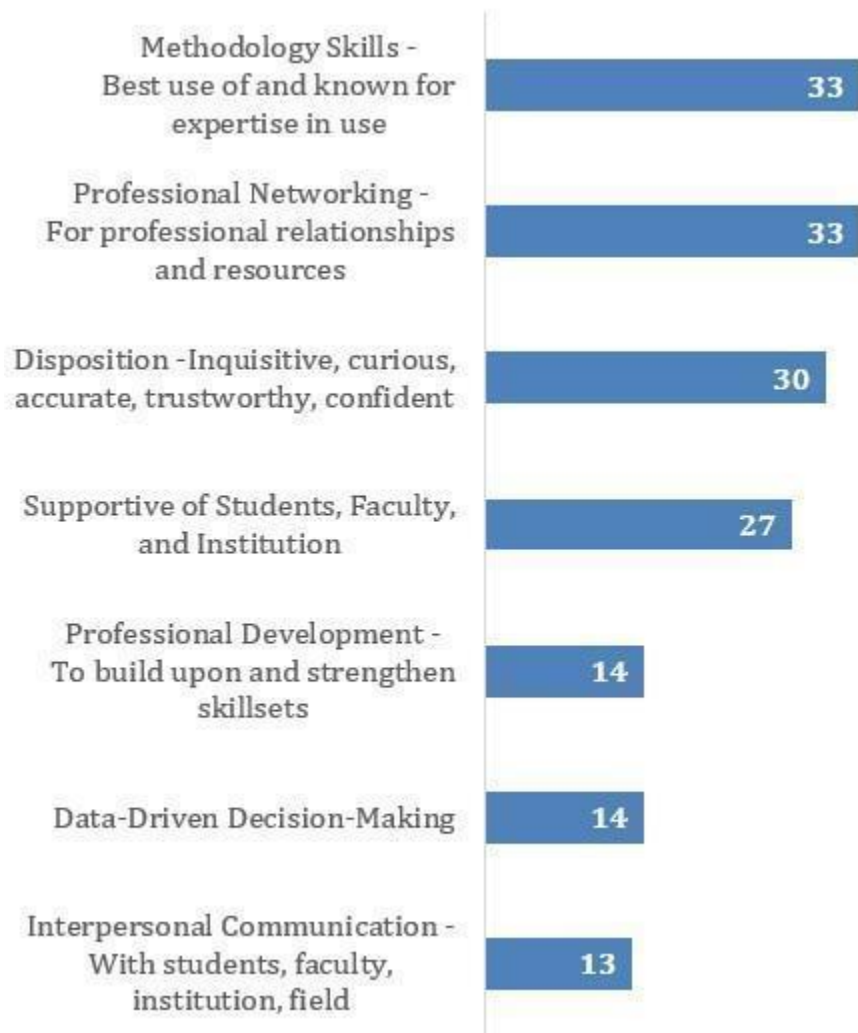


Figure 2

Top Important or Influential Themes in Forming an HEA Professional Identity

respondents, 109 provided responses to the question. The prominent themes that emerged centered strongly around supervisors being supportive of and providing them, and their team where applicable, autonomy in their work. Notably, respondents advised they felt their supervisor trusted them enough to be supportive and allow them to maintain autonomy and not question their processes or expertise. This “increases their productivity and efficiency,” noting that if their “boss was more focused on time, and not outputs or outcomes, they would only get 37.5 hours from [them] a week. That would be the primary measure of [their] productivity.” In addition to these themes, many of the HEAs noted that their supervisors sought their input on decisions. They stated the best boss “supports them 100%, listens to ideas, takes time to think about offers, talks about our work/life balance, and shares stories. Includes them in all the right areas.” HEAs also felt that their supervisors were effective at interpersonal communication, specifically by “foster[ing] open communication that is truly a dialogue and never feels forced or authoritative” in creating and maintaining relationships with them, their team, and the higher education community. Figure 3 notes the number of responses containing the top themes and Appendix H lists these plus response examples.

Job Satisfaction.

Is there anything else you would like to share with us about your job satisfaction? (e.g., things that would increase your job satisfaction?). The follow up question inquired on respondents’ additional comments or feedback about their job satisfaction. Of the 250 respondents, 79 provided responses to the question. While the

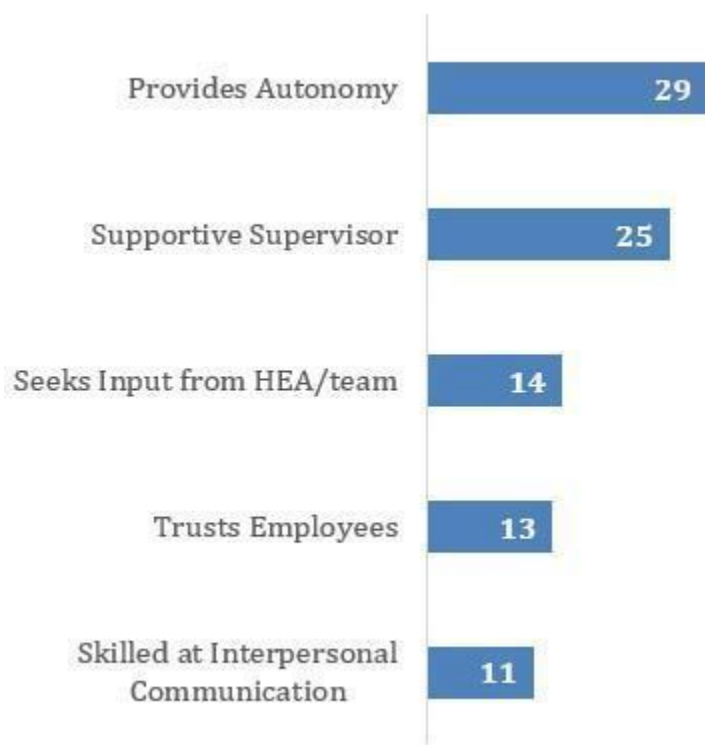


Figure 3

Respondents' Immediate Supervisor's Leadership Style Comment Top Themes

responses were more inconsistent for this question, the prominent themes that emerged either positively or negatively affected the respondents' job satisfaction. The negative (-) themes were the most common because they related to the assessment position and culture at the institutional level: position limitations (underpaid/lack of advancement) and that assessment needs to be more valued. HEAs indicated these themes of "not having a clear path for advancement" and "being paid less than others doing the same work" lowered their job satisfaction because "raises come only with promotions" and forces them to move to other institutions or out of higher education entirely. Combine this with the lack of an assessment culture and the "inherent negative bias" around assessment, because the "most difficult part of the job is getting others to see its importance," and HEAs experience additional low job satisfaction. The positive (+) themes were related to the relationships of an assessment professional: being part of a professional network and respected for their expertise. HEAs specifically identified "stronger collaborations with colleagues and having a 'best friend' at work" and a "supporting environment where everyone respects each other's areas of expertise and who work together to advance our institutional mission" as instrumental in this. They also felt that "leaders and folks on campus trust [their] judgment and see [them] as an expert in the field." These themes illustrate that HEAs job satisfaction improved when they worked with other HEAs and were respected by colleagues for their expertise. Following these top themes, HEAs also discussed the remote work opportunities and "loving the autonomy" in the position as increasing their job satisfaction. Additionally, outdated assessment processes or technology were noted as lowering satisfaction because "there doesn't seem to be an understanding that developing custom requests takes time

and is lower priority than meeting state and federal reporting requirements.” Figure 4 notes the number of responses containing the top themes and Appendix I lists these plus response examples.

Work Motivation.

Is there anything else you would like to share with us about your work motivation? (e.g., other reasons why you are motivated to work). The next question inquired on respondents’ additional comments or feedback about their work motivation. Of the 250 respondents, 86 provided responses to the question. The prominent theme focused heavily on support. Many of the HEAs stated their primary motivation was to support and make an impact on students, faculty, and institutions, with higher education overall also benefiting from this work. The ability to “play a vital role in the functioning of an institution of higher education for the betterment of ALL students” leaves them “motivated to this work because of how it allows [them] to help others in the campus community (i.e., faculty, students, etc.)” The 3 other prominent themes were aimed towards HEAs themselves: benefits, work and life balance, and use of their skills. The position provides “some stability, job security, and opportunities that have jived with personal/family needs and constraints” by allowing them to “work 8:30am-5:00pm and have a life outside of the job.” HEAs advised that their need to have the lifestyle higher education provides, such as the academic calendar, daily work schedule, medical insurance, retirement, etc., allows them to live fuller lives. Lastly, many were motivated to use the methodology skills more often, when compared to faculty or other administrative duties. As such, it makes “use of a unique set of skills that [many] have in mathematics, statistics,

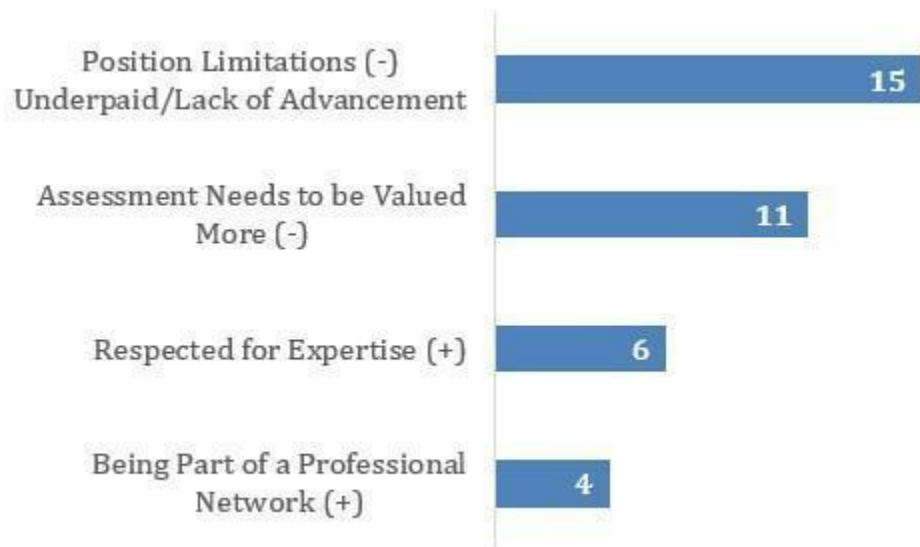


Figure 4

Respondents' Job Satisfaction Comment Top Themes

survey development, accreditation, written communication, and curriculum design.” Figure 5 notes the number of responses containing the top themes and Appendix J lists these plus response examples.

Professional Development Investment.

Is there anything else you would like to share with us about your professional development investment? The next to last open-ended question inquired about respondents’ additional comments or feedback about their professional development investment. Of the 250 respondents, 58 provided a response to the question. The prominent themes focused on the limitations from institutions and the benefits of having professional development supported by supervisors and institutions. The most common concepts in institutional limitations were budgets, available time, and professional development opportunities. Several reported “each department is responsible for their own professional development, that assessment does not have a budget.” Similarly, they stated that their “current supervisor is particular about the ways [they] can use funding and resources towards development as an assessment professional” and that can be “difficult to justify a lot of the opportunities for assessment folks.” Alternately, many of the HEAs stated they were fully supported by their supervisors and institutions with adequate funds, work time, and opportunities to seek out professional development. These HEAs found that their “institution has limited funds for professional development but has provided whatever [they] have asked for in terms of professional development (i.e., conferences and memberships).” They feel they are “provided with a lot of time and judgment and [they] have a lot of flexibility.” This leads to a “good budget for professional

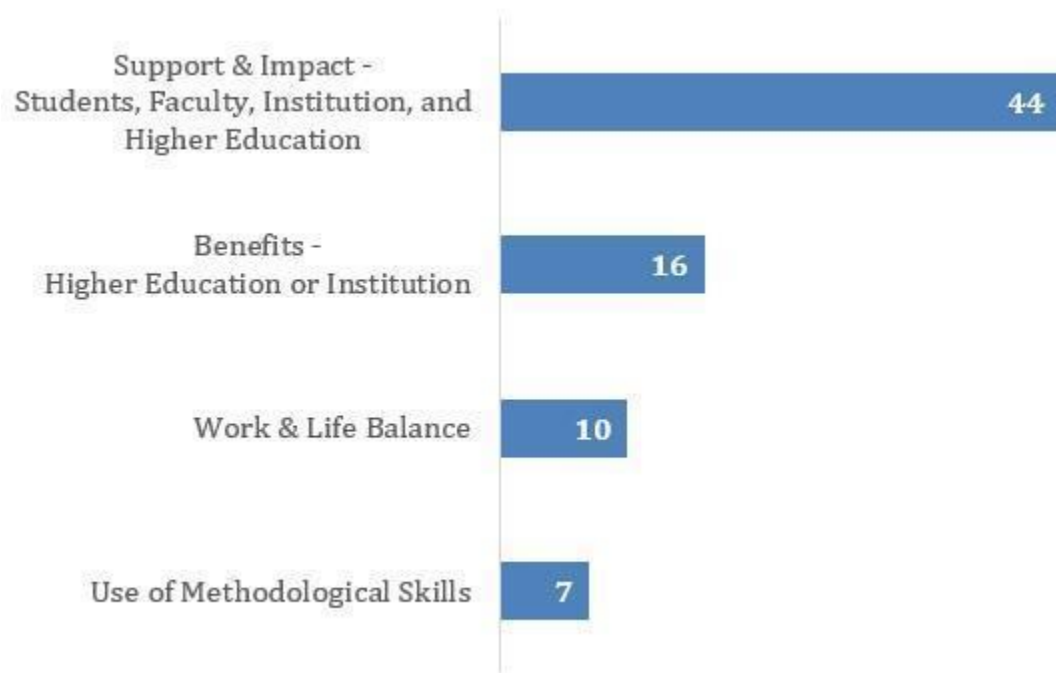


Figure 5

Respondents' Work Motivation Comment Top Themes

development” because the HEAs have “flexibility in terms of how the budget is spent and how [they] spend time on professional development” due to “having decision making authority over what professional development [they] engage.” Specifically, they stated “it's a good environment for capacity building” as a professional. Figure 6 notes the number of responses containing the top themes and Appendix K lists these plus response examples.

Overall Feedback.

Is there anything else that you would like to share with us about your role as a Higher Education Assessment Professional? The last open-ended question inquired on respondents' additional comments or feedback about their professional development investment. Of the 250 respondents, 58 provided a response to the question. While the responses were very diverse, the prominent themes were centered on the respondents valuing assessment work and promoting assessment culture at institutions. HEAs responded that they love the work and enjoy building relationships and supporting the higher education community. They see value because “it's an important role and it is challenging because of the competitive market-oriented higher education landscape that [it] exists within.” Also, it is “usually doing something that no one else at the institution is doing, so it can be a lonely job, which is why having colleagues and a sense of the profession is so important” and they “believe this work is transformative and beneficial for all higher education educators.” Relatedly, they also wish the assessment culture in higher education could be improved. HEAs advised they feel assessment is not understood and a bad assessment culture affects its processes at the institution. HEAs stated the “perception

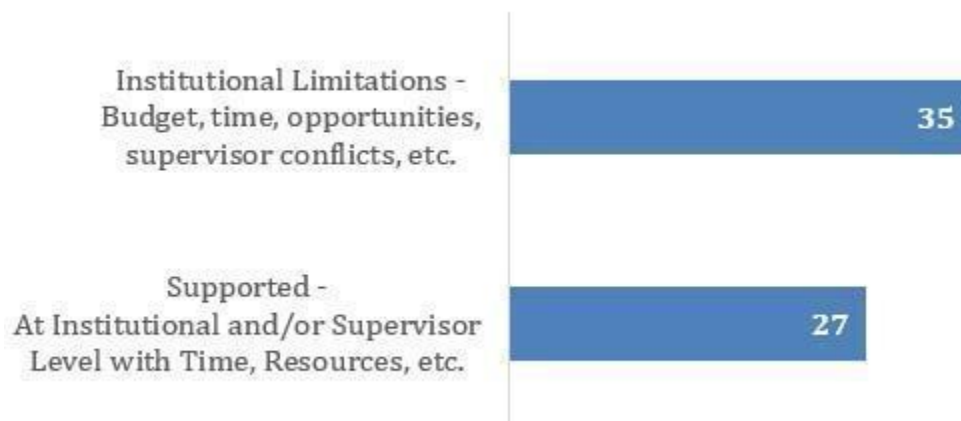


Figure 6

Respondents' Professional Development Investment Comment Top Themes

of HEAs has slowly evolved into a more respected support for faculty and staff” and that “lack of education for higher education professionals is the root cause of intimidation of the use of assessment strategies and tools.” Following this, the next most common theme was being an “accidental” HEA. Several respondents stated they did not intend to go into assessment, but “fell” into it instead, usually by appointment or necessity. For example, some HEAs advised they were “either from a faculty role or just from learning on the job and suddenly being the person who ‘knows’ assessment.” Figure 7 notes the number of responses containing the top themes and Appendix L lists these plus response examples.

Quantitative Analyses.

Frequencies and Descriptives. The Professional Identity descriptive statistics matrix identified several key items. Respondents were asked to rate their level of agreement with selections of 1 (Strongly Disagree), 2 (Disagree), 3 (Neither Agree nor Disagree), 4 (Agree), and 5 (Strongly Agree) and HEAs reported a high level of agreement on five of the eight items. Three items, “I am often ashamed to admit that I am working in this profession,” “I find myself making excuses for belonging to this profession,” and “I try to hide that I am working in this profession” were reverse coded in data cleaning. In the results, the items, “I feel like I am a member of this profession” ($M = 4.02$; $SD = .85$), “I am often ashamed to admit that I am working in this profession” ($M = 1.50$; $SD = .79$), “I find myself making excuses for belonging to this profession” ($M = 1.65$; $SD = .95$), “I try to hide that I am working to be part of this profession” ($M = 1.48$; $SD = .72$), and “I can identify positively with members of this profession” ($M = 4.09$; $SD = .80$), demonstrating that HEAs

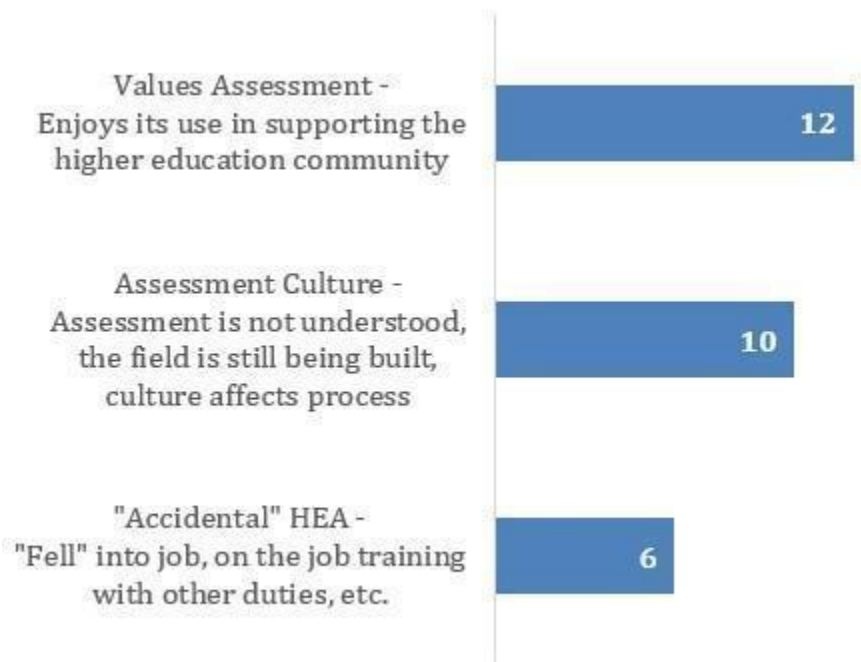


Figure 7

Respondents' Overall Comment Top Themes

identify highly with and strongly disagree with being ashamed, trying to hide, or making excuses for being in the profession. Interestingly, the lowest rated item was “I feel I have strong ties with members of this profession” ($M = 3.40$; $SD = 1.10$), indicating there may be a need for HEAs to build better relationships with other HEAs. The overall scale mean for Professional Identity was high at 4.07 ($SD = .60$) and over 80% of the HEAs agreed or strongly agreed that they felt like they were a member of the assessment professional field. Table 3 contains the descriptive statistics for all Professional Identity items.

The descriptive statistics of the Leadership Styles scale revealed the most common leadership style among this sample of HEAs. A scale of 1 (Never True), 2 (Rarely True), 3 (Sometimes True), 4 (Often True), and 5 (Always True) was provided to HEAs to rate the 11 leadership style items about their immediate supervisors. The items “Encourages their employees’ input in decisions” ($M = 4.0$; $SD = .91$), “Engages in communication with their subordinates” ($M = 4.19$; $SD = .91$), and “Tries to be a leader” ($M = 4.28$; $SD = .90$) were the highest scored items in responses. HEAs stated these items were often or always true 77%, 80%, and 83% of the time. These items were the three characteristics of the “Democratic” leadership style in the scale. The next highest rated items were “Is hands off” ($M = 3.31$; $SD = 1.10$) and “Leaves decision making and problem-solving power to the employees” ($M = 3.59$; $SD = .75$). This shows that the Laissez-faire leadership style was the second most common leadership style in the sample. The Authoritarian “Is very focused on tasks” ($M = 3.49$; $SD = .95$) and Bureaucratic “Relies on regulations” ($M = 3.13$; $SD = .92$) items rounded out the higher scored items. The lowest rated items were “Is impersonal with their employees” ($M = 2.00$; $SD = 1.02$) and “Makes most decisions without group discussions” (

Table 3*Professional Identity Item Descriptive Statistics*

Item	Min	Max	Mean	SD
I can identify positively with members of this profession.	1.00	5.00	4.09	0.80
I feel like I am a member of this profession.	1.00	5.00	4.02	0.85
I feel I share characteristics with other members of this profession.	2.00	5.00	3.92	0.82
Being a member of this profession is important to me.	1.00	5.00	3.80	0.89
I feel I have strong ties with members of this profession.	1.00	5.00	3.40	1.07
I find myself making excuses for belonging to this profession.	1.00	5.00	1.65	0.95
I am often ashamed to admit that I am working in this profession.	1.00	5.00	1.50	0.79
I try to hide that I am working to be part of this profession.	1.00	5.00	1.48	0.72

Note: $n = 250$.

$M = 2.54$; $SD = .97$), indicating these scenarios happen less frequently in HEAs workplaces. Table 4 provides a full list of the 4 leadership style variables, their items from the scale, and descriptive statistics. The Job Satisfaction results illustrated overall positive responses from HEAs about aspects that they were satisfied about within their role. HEAs were given the options of 1 (Very Dissatisfied), 2 (Dissatisfied), 3 (Neither Satisfied nor Dissatisfied), 4 (Satisfied), 5 (Very Satisfied) on its 20 items. Among the highest rated items were “The way my job provides steady employment” ($M = 4.43$; $SD = .73$), “The chance to do things for other people” ($M = 4.36$; $SD = .69$), “The chance to do different things from time to time” ($M = 4.24$; $SD = .81$), “The chance to try my own methods of doing the job” ($M = 4.30$; $SD = .79$), “The freedom to use my own judgment” ($M = 4.20$; $SD = .84$), “The chance to work alone on the job” ($M = 4.12$; $SD = .74$), and “Being able to do things that don’t go against my conscience” ($M = 4.22$; $SD = .85$). These results compose a perspective that HEAs are satisfied with the higher education assessment profession to reliably provide opportunities to help others and the freedom to make their own choices in completing their work. The only item below a mean of 3.0 was “The chances for advancement on this job” ($M = 2.92$; $SD = 1.16$), only 34% of HEAs feel satisfied or very satisfied with the potential room to move upward from their position. The overall Job Satisfaction scale mean was 3.89 ($SD = .55$), verifying that HEAs feel an overall satisfaction with their positions. The Work Motivation scale provided a look into the items that inspire HEAs to be motivated in their work. The 18-item scale listed the options of 1 (Strongly Disagree), 2 (Disagree), 3 (Neither Agree nor Disagree), 4 (Agree), and 5 (Strongly Agree) for HEAs to select their level of agreement on items that motivate them in their role. The top performing items were “For the satisfaction

Table 4*Leadership Style Item Descriptive Statistics*

Item	Min	Max	<i>M</i>	<i>SD</i>
<u>Leadership - Democratic</u>	1.67	5.00	4.18	0.76
Tries to be a leader	1.00	5.00	4.28	0.90
Engages in communication with their employees	1.00	5.00	4.19	0.91
Encourages their employees' input in decisions	1.00	5.00	4.06	0.91
<u>Leadership - Laissez-Faire</u>	1.00	5.00	3.45	0.83
Leaves decision-making and problem-solving power to their employees	1.00	5.00	3.59	0.97
Is hands-off	1.00	5.00	3.31	1.10
<u>Leadership - Authoritarian</u>	1.67	5.00	3.02	0.71
Is very focused on tasks	1.00	5.00	3.49	0.95
Communicates with their employees mostly to convey directions	1.00	5.00	3.04	1.06
Makes most decisions without group discussion	1.00	5.00	2.54	0.97
<u>Leadership - Bureaucratic</u>	1.00	5.00	2.67	0.69
Relies on regulations	1.00	5.00	3.13	0.92
Leads entirely by the rules	1.00	5.00	2.90	0.96
Is impersonal with their employees	1.00	5.00	2.00	1.02

I experience from taking on interesting challenges" ($M = 4.22$; $SD = .75$), "Because I derive much pleasure from learning new things" ($M = 4.20$; $SD = .77$), and "For the satisfaction I experience when I am successful at doing difficult things" ($M = 4.06$; $SD = .85$). HEAs agreed or strongly agreed with these statements 89%, 86%, and 83% respectively. These results show that HEAs are motivated by the challenges in the position and the possibility of learning new techniques to conquer them. Additionally, HEAs rated themselves lowest on amotivation characteristics items "But I don't know why, we are provided with unrealistic working conditions" ($M = 2.19$; $SD = 1.19$) and "But I don't know, too much is expected of us" ($M = 2.35$; $SD = 1.16$). The overall Work Motivation scale mean was a moderate agreement level of 3.36 ($SD = .49$).

The Professional Development Investment scale ascertained the perceptions of HEAs and their involvement with professional development. The 13-item scale requested HEAs to rate their opinion of the statements on a scale of 1 (Strongly Disagree), 2 (Disagree), 3 (Neither Agree nor Disagree), 4 (Agree), and 5 (Strongly Agree). HEAs ranked "Focusing on my professional development is important to me" ($M = 4.65$; $SD = .56$) as the highest item, with over 97% that agree or strongly agree with the statement. Among the other highest ranked items were "I invest my own time in my professional development" ($M = 4.51$; $SD = .64$), "My immediate supervisor is supportive of my professional development" ($M = 4.44$; $SD = .82$), "My institution invests resources for my professional development" ($M = 4.10$; $SD = .93$), and "My institution is supportive of my professional develop" ($M = 4.06$; $SD = .95$) state that HEAs feel supported by their supervisors and institutions and are comfortable with investing their time to complete professional

development. HEAs ranked “I invest my own money in my professional development” ($M = 3.34$; $SD = 1.31$) the lowest of the items, stating they prioritize professional development even if the resources and support is not available from their supervisor or institution. Table 5 illustrates the overall for the Professional Development Investment and all overall subscales.

Main Variables Differences. Independent t -tests and one-way between-groups analyses of variance (ANOVA) were conducted to determine if there were any significant differences in group means on the overall subscales for Professional Identity, the four Leadership Styles, Job Satisfaction, Work Motivation, and the two Professional Development Investment variables. Six independent t -tests were conducted with the respondent’s supervisor’s job title (Director and Administration), institution category (Community College/Technical School and 4-year university/college) and minority status (No, it is a Primary White Institution [PWI] and Yes, it is a Minority Serving Institution [MSI]), if their role was 100% assessment (No and Yes), gender identity (Man and Woman), and if they considered themselves to be Hispanic/Latino (Yes and No). Seven ANOVA tests were conducted to determine if there were group differences in the means of the respondent’s job title (Professional, Director, and Administration), institution type (Private For-Profit, Private Nonprofit, and Public), institution size (Small: <4,999 students, Medium: 5,000-9,999 students, Large: 10,000-19,999 students, and Very Large: 20,000+ students), assessment office size (Small: 1-2 full-time employees, Medium: 3-5 full-time employees, and Large: 10,000-19,999 students), highest degree earned (Bachelor’s [e.g., B.A., B.S.], Master's [e.g., M.A., M.S.], and Doctorate or Professional Terminal Degree), highest degree

Table 5*Subscale Overall Descriptive Statistics*

Variable	Min	Max	Mean	SD
Professional Identity	2.00	5.00	4.07	.60
Leadership Authoritarian	1.67	5.00	3.02	0.71
Leadership Democratic	1.67	5.00	4.18	0.76
Leadership Laissez-faire	1.00	5.00	3.45	0.83
Leadership Bureaucratic	1.00	5.00	2.67	0.69
Job Satisfaction	1.85	4.95	3.89	0.55
Work Motivation	1.83	4.72	3.36	0.49
Professional Development Investment - Overall	1.92	5.00	4.03	0.56
Professional Development Investment - Self	1.75	5.00	4.18	0.62
Professional Development Investment - Other	1.25	5.00	3.97	0.75

field (Social Sciences, Humanities, Natural Sciences, and Business) and race (Asian, Black or African American, and White).

Supervisor's Job Title Differences. First, an independent samples *t*-test was conducted to look for differences in the subscale variables and the respondents' Supervisor's Job Title: Director and Administration. For *Professional Identity*, results were statistically significant, $t(235) = -2.278$, $p = .024$ and small effect size $d = -.344$, indicating there were differences in the Director ($M = 3.92$, $SD = .68$), and Administration ($M = 4.12$, $SD = .56$) groups. Respondents with supervisors in administration roles rate themselves higher in Professional Identity. In *Leadership - Authoritarian*, results were not statistically significant, $t(235) = .980$, $p = .328$ and small effect size $d = .148$, indicating there were no differences in the Director ($M = 3.09$, $SD = .78$), and Administration ($M = 2.98$, $SD = .68$) groups. In *Leadership - Democratic*, results were not statistically significant, $t(234) = .072$, $p = .943$ and small effect size $d = .011$, indicating there were no differences in the Director ($M = 4.19$, $SD = .64$), and Administration ($M = 4.18$, $SD = .78$) groups. In *Leadership - Laissez-Faire*, results were statistically significant, $t(234) = -2.607$, $p = .010$ and small effect size $d = -.394$, indicating there were differences in the Director ($M = 3.23$, $SD = .80$), and Administration ($M = 2.64$, $SD = .61$) groups. Respondents with supervisors in administration reported this style of leadership more than those in a director role. In *Leadership - Bureaucratic*, results were not statistically significant, $t(234) = -.263$, $p = .792$ and small effect size $d = -.040$, indicating there were no differences in the Director ($M = 2.64$, $SD = .61$), and Administration ($M = 2.66$, $SD = .72$) groups. With *Job Satisfaction*, results were not statistically significant, $t(235) = -1.899$, $p = .059$ and small effect size $d = -$

.287, indicating there were no differences in the Director ($M = 3.79$, $SD = .60$), and Administration ($M = 3.94$, $SD = .52$) groups. Regarding *Work Motivation*, results were not statistically significant, $t(235) = -1.586$, $p = .114$ and small effect size $d = -.240$, indicating there were no differences in the Director ($M = 3.27$, $SD = .45$), and Administration ($M = 3.38$, $SD = .50$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $t(235) = -1.418$, $p = .158$ and small effect size $d = -.214$, indicating there were no differences in the Director ($M = 4.09$, $SD = .68$), and Administration ($M = 4.22$, $SD = .60$) groups. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $t(235) = .284$, $p = .776$ and small effect size $d = .043$, indicating there were no differences in the Director ($M = 4.00$, $SD = .70$), and Administration ($M = 3.97$, $SD = .72$) groups.

Community College/Technical School and 4-year University/College

Differences. An independent samples t -test was conducted to look for differences in the subscale variables and the respondents' Institution Type, between Community College/Technical School and 4-year University/College. For *Professional Identity*, results were not statistically significant, $t(235) = -.562$, $p = .574$ and small effect size $d = -.105$, indicating there were no differences in Community College/Technical School ($M = 3.99$, $SD = .65$) and 4-year University/College ($M = 4.05$, $SD = .58$) HEAs. In *Leadership - Authoritarian*, results were not statistically significant, $t(235) = 1.673$, $p = .096$ and small effect size $d = .314$, indicating there were no differences in the Community College/Technical School ($M = 3.21$, $SD = .74$), and 4-year University/College ($M = 2.99$, $SD = .70$) HEAs. In *Leadership - Democratic*, results were not statistically significant, $t(234) = -$

1.457, $p = .146$ and small effect size $d = -.274$, indicating there were no differences in the Community College/Technical School ($M = 3.99, SD = .77$), and 4-year University/College ($M = 4.19, SD = .76$) HEAs. In *Leadership – Laissez-Faire*, results were not statistically significant, $t(234) = -1.603, p = .110$ and small effect size $d = -.301$, indicating there were no differences in the Community College/Technical School ($M = 3.23, SD = .94$), and 4-year University/College ($M = 3.48, SD = .81$) HEAs. In *Leadership - Bureaucratic*, results were not statistically significant, $t(234) = 1.669, p = .096$ and small effect size $d = .313$, indicating there were no differences in the Community College/Technical School ($M = 2.86, SD = .77$), and 4-year University/College ($M = 2.64, SD = .68$) HEAs. With *Job Satisfaction* results were statistically significant, $t(235) = -2.093, p = .037$ with a small effect size $d = -.393$, stating there is a significant difference in Community College/Technical School ($M = 3.70, SD = .63$) and 4-year University/College HEAs ($M = 3.90, SD = .53$). HEAs at 4-year universities/colleges rated themselves higher in Job Satisfaction. Regarding *Work Motivation*, results were not statistically significant, $t(235) = -.264, p = .792$ and small effect size $d = -.050$, indicating there were no differences in how Community College/Technical School ($M = 3.33, SD = .49$) and 4-year University/College ($M = 3.36, SD = .48$) HEAs. For *Professional Development Investment - Self*, results were not statistically significant, $t(234) = 1.007, p = .315$ and small effect size $d = .191$, indicating there were no differences in the Community College/Technical School ($M = 4.28, SD = .68$), and 4-year University/College ($M = 4.16, SD = .62$) HEAs. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $t(235) = -1.377, p = .170$ with small effect size $d = -.258$,

indicating there were no differences in the Director ($M = 3.80, SD = .79$), and Administration ($M = 3.98, SD = .71$) HEAs.

PWI and MSI Differences. Next, an independent samples t -test was conducted to look for differences in the subscales and the respondents' institution minority status, between PWI and MSI. For *Professional Identity*, results were not statistically significant, $t(219) = -1.481, p = .140$ and no effect size $d = -.221$, indicating there were no differences in PWI ($M = 4.01, SD = .64$) and MSI ($M = 4.14, SD = .51$) institutions. In *Leadership - Authoritarian*, results were not statistically significant, $t(219) = -1.291, p = .198$ and small effect size $d = -.192$, indicating there were no differences in the PWI ($M = 2.99, SD = .72$), and MSI ($M = 3.13, SD = .70$) institutions. In *Leadership - Democratic*, Levene's statistic was significant, $F = 14.60, p < .001$, indicating equal variances could not be assumed. The results were not statistically significant, $t(86.469) = 1.535, p = .128$ and small effect size $d = .267$, indicating there were no differences in the PWI ($M = 4.22, SD = .66$), and MSI ($M = 4.02, SD = .96$) institutions. In *Leadership - Laissez-Faire*, results were not statistically significant, $t(218) = -.026, p = .979$ and small effect size $d = -.004$, indicating there were no differences in the PWI ($M = 3.47, SD = .83$) and MSI ($M = 3.47, SD = .86$) institutions. In *Leadership - Bureaucratic*, results were not statistically significant, $t(218) = -1.292, p = .198$ and small effect size $d = -.193$, indicating there were no differences in the PWI ($M = 2.64, SD = .66$), and MSI ($M = 2.77, SD = .80$) institutions. With *Job Satisfaction*, results were not statistically significant, $t(219) = .643, p = .521$ with small effect size $d = .096$, indicating there were no differences in PWI ($M = 3.90, SD = .52$) and MSI ($M = 3.85, SD = .62$) institutions. Regarding *Work Motivation*, results were not statistically significant, $t(219) = -1.372, p = .171$ and

small effect size $d = -.204$, indicating there were no differences in PWI ($M = 3.33, SD = .50$) and MSI ($M = 3.43, SD = .48$) institutions. For *Professional Development Investment - Self*, results were not statistically significant, $t(218) = -.778, p = .438$ and small effect size $d = -.117$, indicating there were no differences in the PWI ($M = 4.14, SD = .64$), and MSI ($M = 4.21, SD = .58$) institutions. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $t(219) = 1.710, p = .089$ and small effect size $d = .255$, indicating there were no differences in the PWI ($M = 4.02, SD = .68$), and MSI ($M = 3.84, SD = .80$) institutions.

100% vs <100% Assessment Focused Role Differences. After this, an independent samples t -test was conducted to look for differences in the subscales and if the HEAs role was 100% assessment focused, specifically Yes or No. For *Professional Identity*, results were not statistically significant, $t(245) = .367, p = .714$ and small effect size $d = .048$, indicating there were no differences in HEAs that selected No ($M = 4.09, SD = .59$) and those that selected Yes ($M = 4.06, SD = .61$) that their role was 100% assessment. In *Leadership - Authoritarian*, results were not statistically significant, $t(245) = -1.271, p = .205$ and small effect size $d = -.165$, indicating there were no differences in HEAs that selected No ($M = 2.87, SD = .69$), and those that selected Yes ($M = 3.09, SD = .71$) that their role was 100% assessment. In *Leadership - Democratic*, results were not statistically significant, $t(244) = .561, p = .576$ and small effect size $d = .073$, indicating there were no differences in HEAs that selected No ($M = 4.19, SD = .75$), and those that selected Yes ($M = 4.14, SD = .77$) that their role was 100% assessment. In *Leadership - Laissez-Faire*, results were not statistically significant, $t(244) = -1.039, p = .300$ and small effect size $d = -.135$, indicating

there were no differences in HEAs that selected No ($M = 3.40, SD = .84$), and those that selected Yes ($M = 3.51, SD = .81$) that their role was 100% assessment. In *Leadership - Bureaucratic*, results were not statistically significant, $t(244) = 1.167, p = .244$ and small effect size $d = .152$, indicating there were no differences in HEAs that selected No ($M = 2.72, SD = .65$), and those that selected Yes ($M = 2.61, SD = .73$) that their role was 100% assessment. With *Job Satisfaction*, results were not statistically significant, $t(245) = .065, p = .949$ and small effect size $d = .008$, indicating there were no differences in HEAs that selected No ($M = 3.90, SD = .56$) and those that selected Yes ($M = 3.89, SD = .56$) that their role was 100% assessment. Regarding *Work Motivation*, results were not statistically significant, $t(245) = .323, p = .747$ and small effect size $d = .042$, indicating there were no differences in HEAs that selected No ($M = 3.38, SD = .52$) and those that selected Yes ($M = 3.36, SD = .46$) that their role was 100% assessment. For *Professional Development Investment - Self*, Levene's statistic was significant, $F = 6.007, p = .015$, indicating equal variances could not be assumed. The results were not statistically significant, $t(173.330) = .984, p = .326$ and small effect size $d = .135$, indicating there were no differences in HEAs that selected No ($M = 4.21, SD = .66$), and those that selected Yes ($M = 4.14, SD = .96$) that their role was 100% assessment. Finally, for *Professional Development Investment - Other*, Levene's statistic was significant, $F = 4.773, p = .030$, indicating equal variances could not be assumed. The results were not statistically significant, $t(178.862) = .309, p = .758$ and small effect size $d = .042$, indicating there were no differences in HEAs that selected No ($M = 3.98, SD = .65$), and those that selected Yes ($M = 3.95, SD = .81$) that their role was 100% assessment.

Gender Identity Differences. Following this analysis, an independent samples *t*-test was conducted to look for differences in the subscales and the respondents' Gender Identity, specifically Man or Woman. For *Professional Identity*, results were not statistically significant, $t(241) = -.405$, $p = .686$ and small effect size $d = -.062$, indicating there were no differences in HEAs that selected Man ($M = 4.03$, $SD = .66$) and those that selected Woman ($M = 4.07$, $SD = .58$) as their gender identity. In *Leadership - Authoritarian*, results were not statistically significant, $t(241) = .908$, $p = .365$ and small effect size $d = .139$, indicating there were no differences in HEAs that selected Man ($M = 3.10$, $SD = .62$) and those that selected Woman ($M = 3.01$, $SD = .72$) as their gender identity. In *Leadership - Democratic*, results were not statistically significant, $t(240) = .060$, $p = .952$ and small effect size $d = .009$, indicating there were no differences in HEAs that selected Man ($M = 4.19$, $SD = .76$) and those that selected Woman ($M = 4.07$, $SD = .58$) as their gender identity. In *Leadership - Laissez-Faire*, results were not statistically significant, $t(240) = .101$, $p = .920$ and small effect size $d = .015$, indicating there were no differences in HEAs that selected Man ($M = 3.47$, $SD = .94$) and those that selected Woman ($M = 3.46$, $SD = .79$) as their gender identity. In *Leadership - Bureaucratic*, results were not statistically significant, $t(240) = 1.202$, $p = .231$ and small effect size $d = .184$, indicating there were no differences in HEAs that selected Man ($M = 2.78$, $SD = .79$) and those that selected Woman ($M = 2.65$, $SD = .66$) as their gender identity. With *Job Satisfaction*, results were not statistically significant, $t(241) = .239$, $p = .812$ and small effect size $d = .037$, indicating there were no differences in HEAs that selected Man ($M = 3.91$, $SD = .57$) and those that selected Woman ($M = 3.89$, $SD = .53$) as their gender identity. Regarding *Work Motivation*, results were not statistically

significant, $t(241) = .337, p = .737$ and small effect size $d = .052$, indicating there were no differences in HEAs that selected Man ($M = 3.38, SD = .62$) and those that selected Woman ($M = 3.36, SD = .45$) as their gender identity. For *Professional Development Investment - Self*, results were not statistically significant, $t(240) = -.887, p = .376$ and small effect size $d = -.136$, indicating there were no differences in HEAs that selected Man ($M = 4.11, SD = .58$) and those that selected Woman ($M = 4.20, SD = .64$) as their gender identity. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $t(241) = .064, p = .949$ and small effect size $d = .010$, indicating there were no differences in HEAs that selected Man ($M = 3.98, SD = .74$) and those that selected Woman ($M = 3.97, SD = .70$) as their gender identity.

Respondent Job Title Differences. The first one way between groups ANOVA was conducted to look for differences between the subscales and the respondents' Job Title: Professional, Director, and Administration. For *Professional Identity*, Levene's test for equality of variances was violated and a Welch's test, $F(2, 236) = .386, p = .884$ with a small effect size ($\omega^2 = -.005$), indicated there was not a statistically significant difference between the Professional ($M = 4.05, SD = .50$), Director ($M = 4.08, SD = .60$), and Administration ($M = 4.15, SD = .65$) groups. In *Leadership - Authoritarian*, results were not statistically significant, $F(2, 236) = .306, p = .737$ with a small effect size ($\omega^2 = -.006$), indicating there was not a statistically significant difference between the Professional ($M = 2.93, SD = .67$), Director ($M = 3.02, SD = .74$), and Administration ($M = 3.02, SD = .65$) groups. In *Leadership - Democratic*, results were not statistically significant, $F(2, 235) = 1.023, p = .361$ with a small effect size ($\omega^2 = .000$), indicating there was not a statistically significant difference

between the Professional ($M = 4.32, SD = .63$), Director ($M = 4.15, SD = .79$), and Administration ($M = 4.19, SD = .75$) groups. In *Leadership - Laissez-Faire*, results were not statistically significant, $F(2, 235) = 1.100, p = .335$ with a small effect size ($\omega^2 = .001$), indicating there was not a statistically significant difference between the Professional ($M = 3.44, SD = .81$), Director ($M = 3.53, SD = .80$), and Administration ($M = 3.30, SD = .83$) groups. . In *Leadership - Bureaucratic*, results were not statistically significant, $F(2, 235) = .407, p = .666$ with a small effect size ($\omega^2 = -.005$), indicating there was not a statistically significant difference between the Professional ($M = 2.58, SD = .67$), Director ($M = 2.66, SD = .71$), and Administration ($M = 2.71, SD = .65$) groups. With *Job Satisfaction*, results were not statistically significant, $F(2, 236) = .194, p = .824$ with a small effect size ($\omega^2 = -.007$), indicating there was not a statistically significant difference between the Professional ($M = 3.87, SD = .63$), Director ($M = 3.92, SD = .50$), and Administration ($M = 3.93, SD = .57$) groups. Regarding *Work Motivation*, results were not statistically significant, $F(2, 236) = .163, p = .850$ with a small effect size ($\omega^2 = -.007$), indicating there was not a statistically significant difference between the Professional ($M = 3.39, SD = .47$), Director ($M = 3.36, SD = .50$), and Administration ($M = 3.33, SD = .57$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $F(2, 236) = .853, p = .428$ with a small effect size ($\omega^2 = -.001$), indicating there was not a statistically significant difference between the Professional ($M = 4.16, SD = .66$), Director ($M = 4.17, SD = .60$), and Administration ($M = 4.32, SD = .65$) groups. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $F(2, 236) = .110, p = .896$ with a small effect size ($\omega^2 = -.008$), indicating there was not a statistically significant difference

between the Professional ($M = 4.01, SD = .79$), Director ($M = 3.97, SD = .68$), and Administration ($M = 4.02, SD = .72$) groups.

Institution Type Differences. Continuing, an ANOVA was conducted to look for differences between the subscales and the respondents' Institution Type: Private For-Profit, Private Nonprofit, and Public. For *Professional Identity*, Levene's test for equality of variances was violated and a Welch's test, $F(2, 244) = .756, p = .481$ with a small effect size ($\omega^2 = -.002$), indicated there was not a statistically significant difference between the Private For-Profit ($M = 4.17, SD = .43$), Private Nonprofit ($M = 4.00, SD = .66$), and Public ($M = 4.09, SD = .56$) groups. In *Leadership - Authoritarian*, results were not statistically significant, $F(2, 244) = .614, p = .542$ with a small effect size ($\omega^2 = -.003$), indicating there was not a statistically significant difference between the Private For-Profit ($M = 2.85, SD = .82$), Private Nonprofit ($M = 2.97, SD = .68$), and Public ($M = 3.05, SD = .71$) groups. In *Leadership - Democratic*, Levene's test for equality of variances was violated and a Welch's test, $F(2, 243) = 4.139, p = .030$ with a small effect size ($\omega^2 = .019$), indicated there was a statistically significant difference between the Private For-Profit ($M = 4.19, SD = .97$), Private Nonprofit ($M = 4.36, SD = .58$), and Public ($M = 4.10, SD = .79$) groups. In *Leadership - Laissez-Faire*, results were not statistically significant, $F(2, 243) = 1.937, p = .146$ with a small effect size ($\omega^2 = .008$), indicating there was not a statistically significant difference between the Private For-Profit ($M = 3.22, SD = .75$), Private Nonprofit ($M = 3.59, SD = .81$), and Public ($M = 3.39, SD = .7841$) groups. In *Leadership - Bureaucratic*, results were not statistically significant, $F(2, 243) = .431, p = .650$ with a small effect size ($\omega^2 = -.005$), indicating there was not a statistically significant difference between the Private For-Profit

($M = 2.66, SD = .71$), Private Nonprofit ($M = 2.61, SD = .75$), and Public ($M = 2.70, SD = .65$) groups. With *Job Satisfaction*, results were not statistically significant, $F(2, 244) = .707, p = .494$ with a small effect size ($\omega^2 = -.002$), indicating there was not a statistically significant difference between the Private For-Profit ($M = 3.81, SD = .60$), Private Nonprofit ($M = 3.95, SD = .52$) and Public ($M = 3.87, SD = .56$) groups. Regarding *Work Motivation*, results were not statistically significant, $F(2, 244) = .666, p = .515$ with a small effect size ($\omega^2 = -.003$), indicating there was not a statistically significant difference between the Private For-Profit ($M = 3.25, SD = .34$), Private Nonprofit ($M = 3.32, SD = .53$), and Public ($M = 3.39, SD = .47$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $F(2, 243) = .252, p = .778$ with a small effect size ($\omega^2 = -.006$), indicating there was not a statistically significant difference between the Private For-Profit ($M = 4.31, SD = .61$), Private Nonprofit ($M = 4.16, SD = .67$), and Public ($M = 4.19, SD = .60$) groups. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $F(2, 244) = .163, p = .850$ with a small effect size ($\omega^2 = -.007$), indicating there was not a statistically significant difference between the Private For-Profit ($M = 4.02, SD = .95$), Private Nonprofit ($M = 4.01, SD = .65$), and Public ($M = 3.96, SD = .73$) groups.

Institution Size Differences. Following this, an ANOVA was conducted to look for differences between the subscales and the respondents' Institution Size in number of students: Small: <4,999, Medium: 5,000-9,999, Large: 10,000-19,999, and Very Large: 20,000+. For *Professional Identity*, results were not statistically significant, $F(3, 240) = 1.218, p = .304$ with a small effect size ($\omega^2 = .003$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 3.97, SD = .61$) Medium: 5,000-9,999

($M = 4.16, SD = .59$), Large: 10,000-19,999 ($M = 4.15, SD = .62$) and Very Large: 20,000+ ($M = 4.03, SD = .56$) groups. In *Leadership - Authoritarian*, results were not statistically significant, $F(3, 240) = .962, p = .411$ with a small effect size ($\omega^2 = .000$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 2.97, SD = .70$) Medium: 5,000-9,999 ($M = 3.16, SD = .59$), Large: 10,000-19,999 ($M = 3.10, SD = .78$) and Very Large: 20,000+ ($M = 2.96, SD = .71$) groups. In *Leadership - Democratic*, Levene's test for equality of variances was violated and a Welch's test, $F(3, 239) = 2.933, p = .037$ with a small effect size ($\omega^2 = .017$), indicated there was not a statistically significant difference between the Small: <4,999 ($M = 4.36, SD = .57$) Medium: 5,000-9,999 ($M = 4.14, SD = .85$), Large: 10,000-19,999 ($M = 3.98, SD = .84$) and Very Large: 20,000+ ($M = 4.14, SD = .78$) groups. In *Leadership - Laissez-Faire*, results were not statistically significant, $F(3, 239) = .466, p = .707$ with a small effect size ($\omega^2 = -.007$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 3.42, SD = .79$) Medium: 5,000-9,999 ($M = 3.57, SD = .68$), Large: 10,000-19,999 ($M = 3.36, SD = .94$) and Very Large: 20,000+ ($M = 3.45, SD = .86$) groups. In *Leadership - Bureaucratic*, results were not statistically significant, $F(3, 239) = .629, p = .597$ with a small effect size ($\omega^2 = -.005$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 2.77, SD = .67$) Medium: 5,000-9,999 ($M = 2.68, SD = .67$), Large: 10,000-19,999 ($M = 2.66, SD = .88$) and Very Large: 20,000+ ($M = 2.61, SD = .62$) groups. With *Job Satisfaction*, results were not statistically significant, $F(3, 240) = 1.318, p = .269$ with a small effect size ($\omega^2 = .004$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 3.91, SD = .46$), Medium: 5,000-9,999 ($M = 3.95, SD = .60$), Large: 10,000-19,999 ($M =$

3.75, $SD = .64$), and Very Large: 20,000+ ($M = 3.92$, $SD = .53$) groups. Regarding *Work Motivation*, results were not statistically significant, $F(3, 240) = .123$, $p = .947$ with a small effect size ($\omega^2 = -.011$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 3.34$, $SD = .49$), Medium: 5,000-9,999 ($M = 3.39$, $SD = .55$), Large: 10,000-19,999 ($M = 3.38$, $SD = .42$), and Very Large: 20,000+ ($M = 3.36$, $SD = .49$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $F(3, 239) = .902$, $p = .441$ with a small effect size ($\omega^2 = -.001$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 4.14$, $SD = .74$), Medium: 5,000-9,999 ($M = 4.32$, $SD = .55$), Large: 10,000-19,999 ($M = 4.17$, $SD = .59$), and Very Large: 20,000+ ($M = 4.13$, $SD = .58$) groups. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $F(3, 240) = 1.333$, $p = .264$ with a small effect size ($\omega^2 = -.007$), indicating there was not a statistically significant difference between the Small: <4,999 ($M = 4.02$, $SD = .63$), Medium: 5,000-9,999 ($M = 3.99$, $SD = .81$), Large: 10,000-19,999 ($M = 3.78$, $SD = .80$), and Very Large: 20,000+ ($M = 4.00$, $SD = .69$) groups.

Assessment Office Size Differences. Similarly, an ANOVA was conducted to look for differences between the five subscales and the respondents' Assessment Office Size in number of full-time employees: Small: 1-2, Medium: 3-5, and Large: 6+. For *Professional Identity*, results were not statistically significant, $F(2, 236) = 2.813$, $p = .062$ with a small effect size ($\omega^2 = .015$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 4.02$, $SD = .61$), Medium: 3-5 ($M = 4.08$, $SD = .58$), and Large: 6+ ($M = 4.33$, $SD = .48$) groups. In *Leadership - Authoritarian*, results were not statistically significant, $F(2, 236) = .281$, $p = .755$ with a small effect size ($\omega^2 = -.006$), indicating there

was not a statistically significant difference between the Small: 1-2 ($M = 2.99, SD = .71$), Medium: 3-5 ($M = 3.04, SD = .69$), and Large: 6+ ($M = 3.11, SD = .76$) groups. In *Leadership - Democratic*, results were not statistically significant, $F(2, 235) = 1.419, p = .244$ with a small effect size ($\omega^2 = .004$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 4.19, SD = .78$), Medium: 3-5 ($M = 4.09, SD = .73$), and Large: 6+ ($M = 4.39, SD = .75$) groups. In *Leadership - Laissez-Faire*, results were not statistically significant, $F(2, 235) = 1.873, p = .156$ with a small effect size ($\omega^2 = .015$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 3.53, SD = .86$), Medium: 3-5 ($M = 3.31, SD = .81$), and Large: 6+ ($M = 3.52, SD = .76$) groups. In *Leadership - Bureaucratic*, results were not statistically significant, $F(2, 235) = .182, p = .834$ with a small effect size ($\omega^2 = -.007$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 2.66, SD = .72$), Medium: 3-5 ($M = 2.70, SD = .61$), and Large: 6+ ($M = 2.74, SD = .76$) groups. With *Job Satisfaction*, results were not statistically significant, $F(2, 236) = 1.746, p = .177$ with a small effect size ($\omega^2 = .006$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 3.87, SD = .56$), Medium: 3-5 ($M = 3.86, SD = .50$) and Large: 6+ ($M = 4.09, SD = .70$) groups. Regarding *Work Motivation*, results were not statistically significant, $F(2, 236) = .453, p = .636$ with a small effect size ($\omega^2 = -.005$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 3.34, SD = .44$), Medium: 3-5 ($M = 3.41, SD = .53$) and Large: 6+ ($M = 3.40, SD = .45$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $F(2, 236) = 1.408, p = .247$ with a small effect size ($\omega^2 = .003$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 4.20, SD = .65$),

Medium: 3-5 ($M = 4.11, SD = .63$) and Large: 6+ ($M = 4.35, SD = .49$) groups. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $F(2, 236) = .379, p = .685$ with a small effect size ($\omega^2 = -.005$), indicating there was not a statistically significant difference between the Small: 1-2 ($M = 3.93, SD = .75$), Medium: 3-5 ($M = 4.02, SD = .64$) and Large: 6+ ($M = 3.99, SD = .87$) groups.

Highest Degree Earned Differences. Progressing to the next analysis, an ANOVA was conducted to look for differences between the subscales and the respondents' Highest Degree Earned: Bachelor's, Master's, and Doctorate or Professional Terminal Degree. For *Professional Identity*, results were not statistically significant, $F(2, 245) = 2.876, p = .058$ with a small effect size ($\omega^2 = .015$), indicating there was a not statistically significant difference between the Bachelor's ($M = 3.72, SD = .88$), Master's ($M = 4.00, SD = .54$), and Doctorate or Professional Terminal Degree ($M = 4.13, SD = .61$) groups. In *Leadership - Authoritarian*, results were not statistically significant, $F(2, 245) = .955, p = .386$ with a small effect size ($\omega^2 = .000$), indicating there was not a statistically significant difference between the Bachelor's ($M = 3.33, SD = .64$), Master's ($M = 2.98, SD = .73$), and Doctorate or Professional Terminal Degree ($M = 3.02, SD = .69$) groups. In *Leadership - Democratic*, Levene's test for equality of variances was violated and a Welch's test, $F(2, 21.074) = .268, p = .767$ with a small effect size ($\omega^2 = -.007$), indicated there was not a statistically significant difference between the Bachelor's ($M = 4.08, SD = .46$), Master's ($M = 4.21, SD = .63$), and Doctorate or Professional Terminal Degree ($M = 4.17, SD = .84$) groups. In *Leadership - Laissez-Faire*, results were not statistically significant, $F(2, 244) = .033, p = .967$ with a small effect size ($\omega^2 = -.008$), indicating there was not a statistically significant difference

between the Bachelor's ($M = 3.44, SD = .90$), Master's ($M = 3.47, SD = .85$), and Doctorate or Professional Terminal Degree ($M = 3.45, SD = .81$) groups. In *Leadership - Bureaucratic*, results were not statistically significant, $F(2, 244) = .076, p = .927$ with a small effect size ($\omega^2 = -.008$), indicating there was not a statistically significant difference between the Bachelor's ($M = 2.71, SD = .49$), Master's ($M = 2.68, SD = .70$), and Doctorate or Professional Terminal Degree ($M = 2.65, SD = .69$) groups. With *Job Satisfaction*, results were not statistically significant, $F(2, 245) = 2.428, p = .090$ with a small effect size ($\omega^2 = .011$), indicating there was not a statistically significant difference between the Bachelor's ($M = 3.67, SD = .59$), Master's ($M = 3.82, SD = .57$), and Doctorate or Professional Terminal Degree ($M = 3.96, SD = .53$) groups. Regarding *Work Motivation*, results were not statistically significant, $F(2, 245) = .801, p = .450$ with a small effect size ($\omega^2 = -.002$), indicating there was not a statistically significant difference between the Bachelor's ($M = 3.42, SD = .72$), Master's ($M = 3.31, SD = .44$), and Doctorate or Professional Terminal Degree ($M = 3.39, SD = .51$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $F(2, 244) = 2.394, p = .093$ with a small effect size ($\omega^2 = .011$), indicating there was not a statistically significant difference between Bachelor's ($M = 4.29, SD = .67$), Master's ($M = 4.08, SD = .67$) and Doctorate or Professional Terminal Degree ($M = 4.26, SD = .58$) groups. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $F(2, 245) = .357, p = .700$ with a small effect size ($\omega^2 = -.005$), indicating there was not a statistically significant difference between Bachelor's ($M = 4.17, SD = .76$), Master's ($M = 3.98, SD = .66$) and Doctorate or Professional Terminal Degree ($M = 3.96, SD = .76$) groups.

Highest Degree Earned Field of Study Differences. Further, an ANOVA was conducted to look for differences between the subscales and the respondents' Highest Degree Earned Field of Study: Social Sciences, Humanities, Natural Sciences, and Business. For *Professional Identity*, results were not statistically significant, $F(3, 205) = 1.597, p = .191$ with a small effect size ($\omega^2 = .009$), indicating there was not a statistically significant difference between the Social Sciences ($M = 4.11, SD = .57$), Humanities ($M = 3.90, SD = .67$), Natural Sciences ($M = 3.82, SD = .74$), and Business ($M = 3.91, SD = .74$) groups. In *Leadership - Authoritarian*, results were not statistically significant, $F(3, 205) = 2.125, p = .098$ with a small effect size ($\omega^2 = .016$), indicating there was not a statistically significant difference between the Social Sciences ($M = 3.00, SD = .71$), Humanities ($M = 2.76, SD = .64$), Natural Sciences ($M = 3.43, SD = .76$), and Business ($M = 3.16, SD = .67$) groups. In *Leadership - Democratic*, results were not statistically significant, $F(3, 204) = .600, p = .616$ with a small effect size ($\omega^2 = -.006$), indicating there was not a statistically significant difference between the Social Sciences ($M = 4.18, SD = .72$), Humanities ($M = 4.34, SD = .72$), Natural Sciences ($M = 4.19, SD = .79$), and Business ($M = 4.04, SD = .94$) groups. In *Leadership - Laissez-Faire*, results were not statistically significant, $F(3, 204) = .594, p = .620$ with a small effect size ($\omega^2 = -.006$), indicating there was not a statistically significant difference between the Social Sciences ($M = 3.50, SD = .79$), Humanities ($M = 3.71, SD = .62$), Natural Sciences ($M = 3.64, SD = .75$), and Business ($M = 3.47, SD = 1.08$) groups. In *Leadership - Bureaucratic*, results were statistically significant, $F(3, 204) = 4.290, p = .006$ with a small effect size ($\omega^2 = .045$), indicating there was a statistically significant difference between the Social Sciences ($M = 4.11, SD = .57$), Humanities ($M = 3.90, SD = .67$), Natural

Sciences ($M = 3.82, SD = .74$), and Business ($M = 3.91, SD = .74$) groups. A Tukey post-hoc test revealed there were differences between Natural Sciences and Social Sciences ($p = .007$) and Humanities ($p = .003$). This illustrates that Natural Sciences HEAs experience *Laissez-Faire* significantly less often than those in the Social Sciences and Humanities. There were no statistical differences between Business and Natural Sciences ($p = .051$), Social Sciences ($p = .991$), and Humanities ($p = .735$). With *Job Satisfaction*, results were not statistically significant, $F(3, 205) = 2.276, p = .081$ with a small effect size ($\omega^2 = .018$), indicating there was not a statistically significant difference between the Social Sciences ($M = 3.89, SD = .53$), Humanities ($M = 4.01, SD = .61$), Natural Sciences ($M = 3.92, SD = .38$), and Business ($M = 3.56, SD = .62$) groups. Regarding *Work Motivation*, Levene's test for equality of variances was violated and a Welch's test, $F(3, 19.961) = 2.375, p = .101$ with a small effect size ($\omega^2 = .013$), indicated there was not a statistically significant difference between the Social Sciences ($M = 3.89, SD = .53$), Humanities ($M = 4.01, SD = .61$), Natural Sciences ($M = 3.92, SD = .38$), and Business ($M = 3.56, SD = .62$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $F(3, 204) = 2.419, p = .067$ with a small effect size ($\omega^2 = -.020$), indicating there was not a statistically significant difference between the Social Sciences ($M = 4.22, SD = .63$), Humanities ($M = 3.88, SD = .62$), Natural Sciences ($M = 4.32, SD = .49$), and Business ($M = 4.21, SD = .65$) groups. Finally, for *Professional Development Investment - Other*, results were not statistically significant, $F(3, 205) = 1.553, p = .202$ with a small effect size ($\omega^2 = .008$), indicating there was not a statistically significant difference between the Social Sciences ($M = 3.98, SD = .70$),

Humanities ($M = 4.08, SD = .61$), Natural Sciences ($M = 4.20, SD = .52$), and Business ($M = 3.65, SD = .87$) groups.

Race Differences. Lastly, an ANOVA was conducted to look for differences between the subscales and the respondents' Race: Asian, Black or African American, and White. For *Professional Identity*, results were not statistically significant, $F(2, 233) = 2.855, p = .060$ with a small effect size ($\omega^2 = .015$), indicating there was not a statistically significant difference between the Asian ($M = 4.33, SD = .43$), Black or African American ($M = 3.75, SD = .57$), and White ($M = 4.09, SD = .60$) groups. In *Leadership - Authoritarian*, results were statistically significant, $F(2, 233) = 4.197, p = .016$ with a small effect size ($\omega^2 = .026$), indicating there was a statistically significant difference between the Asian ($M = 3.22, SD = .55$), Black or African American ($M = 3.51, SD = .60$), and White ($M = 2.97, SD = .70$) groups. A Tukey post-hoc test revealed a significant difference between White and Black or African American HEAs ($p = .018$). The category means illustrate that Black or African American HEAs experience this style significantly more often than White HEAs. There were no significant differences between Asian HEAs and Black or African American ($p = .626$) and White ($p = .567$) HEAs. In *Leadership - Democratic*, results were not statistically significant, $F(2, 232) = 1.129, p = .325$ with a small effect size ($\omega^2 = .005$), indicating there was not a statistically significant difference between the Asian ($M = 4.07, SD = 1.05$), Black or African American ($M = 4.08, SD = .96$), and White ($M = 4.23, SD = .70$) groups. In *Leadership - Laissez-Faire*, results were not statistically significant, $F(2, 233) = 1.129, p = .325$ with a small effect size ($\omega^2 = .001$), indicating there was not a statistically significant difference between the Asian ($M = 3.44, SD = .68$), Black or African American ($M = 3.15, SD = .97$), and

White ($M = 3.5, SD = .81$) groups. In *Leadership – Bureaucratic*, results were not statistically significant, $F(2, 232) = 2.863, p = .059$ with a small effect size ($\omega^2 = .016$), indicating there was not a statistically significant difference between the Asian ($M = 2.70, SD = .70$), Black or African American ($M = 3.10, SD = .60$), and White ($M = 2.64, SD = .69$) groups. With *Job Satisfaction*, results were statistically significant, $F(2, 233) = 3.725, p = .026$ with a small effect size ($\omega^2 = .023$), indicating there was a statistically significant difference between the Asian ($M = 3.92, SD = .47$), Black or African American ($M = 3.54, SD = .75$), and White ($M = 3.95, SD = .51$) groups. A Tukey post-hoc test revealed a significant difference between Black or African American and White HEAs ($p = .019$). White HEAs reported a significantly higher job satisfaction rating than Black or African American HEAs. There were no significant differences between Asian and Black or African American ($p = .219$) and White HEAs ($p = .985$). Regarding *Work Motivation*, Levene's test for equality of variances was violated and a Welch's test, $F(2, 13.773) = .119, p = .889$ with a small effect size ($\omega^2 = -.007$), indicated there was not a statistically significant difference between the Asian ($M = 3.44, SD = .44$), Black or African American ($M = 3.33, SD = .75$), and White ($M = 3.37, SD = .47$) groups. For *Professional Development Investment - Self*, results were not statistically significant, $F(2, 232) = 1.422, p = .243$ with a small effect size ($\omega^2 = .004$), indicating there was not a statistically significant difference between the Asian ($M = 4.17, SD = .56$), Black or African American ($M = 4.48, SD = .54$), and White ($M = 4.19, SD = .62$) groups. Finally, for *Professional Development Investment - Other*, Levene's test for equality of variances was violated and a Welch's test, $F(2, 13.773) = .972, p = .403$ with a small effect size ($\omega^2 = .005$), indicated there was not a statistically significant difference between the Asian ($M = 3.80, SD$

= .59), Black or African American ($M = 3.69, SD = 1.16$), and White ($M = 4.01, SD = .67$) groups.

Integrated Summary of Results

Professional Identity. With over 80% of the HEAs agreeing or strongly agreeing that they felt like they were a member of the assessment professional field, the Professional Identity measure understandably demonstrated a high mean of 4.07 ($SD = .60$). These results show that a large majority of the HEAs that responded to the survey have a strong professional identity with the HEA field. In particular, the group differences analyses showed that HEAs with administrators as immediate supervisors ($M = 4.12, SD = .56$) had a statistically significantly higher professional identity, $t(235) = -2.278, p = .024$ and small effect size $d = -.344$, than those with a Director ($M = 3.92, SD = .68$). In the descriptive statistics, the items, “I feel like I am a member of this profession” ($M = 4.02; SD = .85$), “I am often ashamed to admit that I am working in this profession” ($M = 1.50; SD = .79$), “I find myself making excuses for belonging to this profession” ($M = 1.65; SD = .95$), “I try to hide that I am working to be part of this profession” ($M = 1.48; SD = .72$), and “I can identify positively with members of this profession” ($M = 4.09; SD = .80$), demonstrate that HEAs identify highly with and strongly disagree with being ashamed, trying hide, or making excuses for being in the profession. The themes in the qualitative analysis supported this by indicating that HEAs see the positive impact in the higher education community as supportive of their professional identity. Similarly, the lowest rated item was “I feel I have strong ties with members of this profession” ($M = 3.40; SD = 1.10$), indicating there may be a need for HEAs to build better relationships with other HEAs. This is supported by the

themes in the qualitative analysis with HEAs stating they work within assessment but may not identify as an assessment professional and see being part of the field's professional network as part of and necessary in their professional identity.

Leadership Styles. The "Democratic" leadership style was the most common theme and contained the highest-rated items from the analyses. The items "Encourages their employees' input in decisions" ($M = 4.0$; $SD = .91$), "Engages in communication with their subordinates" ($M = 4.19$; $SD = .91$), and "Tries to be a leader" ($M = 4.28$; $SD = .90$) were the highest scored items in responses, illustrating that they were often or always true about HEAs' immediate supervisors. The next highest rated items were "Is hands off" ($M = 3.31$; $SD = 1.10$) and "Leaves decision-making and problem-solving power to the employees" ($M = 3.59$; $SD = .75$). These themes were also seen in the qualitative feedback from HEAs, specifically that their immediate supervisor provides them autonomy, trusts their work, supports them, and seeks their or their team's input on decisions. Furthermore, as the lowest rated items were that their supervisor "Is impersonal with their employees" ($M = 2.00$; $SD = 1.02$) and "Makes most decisions without group discussions" ($M = 2.54$; $SD = .97$), the theme regarding their immediate supervisor being skilled in interpersonal communication is also shown.

The group differences analyses provided mixed results for HEAs in leadership styles. Each style had at least one statistically significant result in the analyses. For *Leadership - Authoritarian*, results were statistically significant in the Race demographic analysis, $F(2, 233) = 4.197$, $p = .016$ with a small effect size ($\omega^2 = .026$). This illustrated that there was a statistically significant difference between the Asian ($M = 3.22$, $SD = .55$), Black

or African American ($M = 3.51, SD = .60$), and White ($M = 2.97, SD = .70$) groups. The Tukey post-hoc test revealed a significant difference between White and Black or African American HEAs ($p = .018$), meaning Black or African American HEAs experience this style significantly more often than White HEAs. With the most common style, *Leadership – Democratic*, in the HEA's institution type, the Levene's test for equality of variances was violated and Welch's test, $F(2, 243) = 4.139, p = .030$ with a small effect size ($\omega^2 = .019$), demonstrated that there were statistically significant differences between the Private For-Profit ($M = 4.19, SD = .97$), Private Nonprofit ($M = 4.36, SD = .58$), and Public ($M = 4.10, SD = .79$) groups. The *Leadership – Laissez-Faire* had statistically significant results with the respondents' Supervisor's Job Title. The results, $t(234) = -2.607, p = .010$ and small effect size $d = -.394$, indicated there were differences in the Director ($M = 3.23, SD = .80$), and Administration ($M = 2.64, SD = .61$) groups and that respondents with supervisors in administration reported this style of leadership more than those in a director role. Finally, the *Leadership – Bureaucratic*, results were statistically significant in the respondents' Highest Degree Earned Field of Study analysis results, $F(3, 204) = 4.290, p = .006$ with a small effect size ($\omega^2 = .045$). This indicated there was a statistically significant difference between the Social Sciences ($M = 4.11, SD = .57$), Humanities ($M = 3.90, SD = .67$), Natural Sciences ($M = 3.82, SD = .74$), and Business ($M = 3.91, SD = .74$) groups. The Tukey post-hoc test revealed there were differences between Natural Sciences and Social Sciences ($p = .007$) and Humanities ($p = .003$). This illustrates that Natural Sciences HEAs experience Laissez-Faire significantly less often than those in the Social Sciences and Humanities.

Job Satisfaction. Respondents reported overall satisfaction with their position as an HEA ($M = 3.89$; $SD = .55$). This could be seen in the descriptive statistics where the highest rated items were “The way my job provides steady employment” ($M = 4.43$; $SD = .73$), “The chance to do things for other people” ($M = 4.36$; $SD = .69$), “The chance to do different things from time to time” ($M = 4.24$; $SD = .81$), “The chance to try my own methods of doing the job” ($M = 4.30$; $SD = .79$), “The freedom to use my own judgment” ($M = 4.20$; $SD = .84$), “The chance to work alone on the job” ($M = 4.12$; $SD = .74$), and “Being able to do things that don’t go against my conscience” ($M = 4.22$; $SD = .85$). In conjunction with this, the themes that emerged in the qualitative feedback, that HEAs were respected for their expertise and had autonomy in their work, constituted a perspective that HEAs’ job satisfaction increased with the freedom make their own choices in completing their work. The descriptive statistics also show that only 34% of HEAs feel satisfied or very satisfied with the potential room to move upward from their position. This was supported with the predominant qualitative feedback theme that position limitations, such as lack of advancement, decreased their job satisfaction.

The group differences analyses produced two statistically significant results with HEAs’ Job Satisfaction. In the Community College/Technical School and 4-year University/College results, $t(235) = -2.093$, $p = .037$ with a small effect size $d = -.393$ and nonsignificant Levene’s test, there was a significant difference in Community College/Technical School ($M = 3.70$, $SD = .63$) and 4-year University/College HEAs ($M = 3.90$, $SD = .53$) with HEAs at 4-year universities/colleges rating themselves higher in Job Satisfaction. The other statistically significant results were in the respondents’ Race

analysis, $F(2, 233) = 3.725, p = .026$ with a small effect size ($\omega^2 = .023$), indicating there was a difference between the Asian ($M = 3.92, SD = .47$), Black or African American ($M = 3.54, SD = .75$), and White ($M = 3.95, SD = .51$) groups. The Tukey post-hoc test revealed a significant difference between Black or African American and White HEAs ($p = .019$), specifically that White HEAs reported a significantly higher job satisfaction rating than Black or African American HEAs.

Work Motivation. A moderate amount of Work Motivation was reported by HEAs with a mean of 3.36 ($SD = .49$) on the measure. The Work Motivation measure's descriptive statistics listed the top performing items as "For the satisfaction I experience from taking on interesting challenges" ($M = 4.22; SD = .75$), "Because I derive much pleasure from learning new things" ($M = 4.20; SD = .77$), and "For the satisfaction I experience when I am successful at doing difficult things" ($M = 4.06; SD = .85$). While there were no statistical group differences in the analyses, these results show that HEAs are motivated by the challenges in the position and the possibility of learning new techniques to conquer them. However, this theme predominant in the qualitative feedback provided by HEAs on the open-ended question. In contrast, the prominent theme was HEAs' motivation to support and make an impact in the higher education community. The theme of HEAs' use of methodology skills appeared less often in the feedback.

Professional Development Investment. HEAs reported a high level of investment in their professional development. In the descriptive statistics, HEAs ranked "Focusing on my professional development is important to me" ($M = 4.65; SD = .56$) as the highest item, with over 97% that agree or strongly agree with the statement. Other highly ranked items,

“I invest my own time in my professional development” ($M = 4.51$; $SD = .64$), “My immediate supervisor is supportive of my professional development” ($M = 4.44$; $SD = .82$), “My institution invests resources for my professional development” ($M = 4.10$; $SD = .93$), and “My institution is supportive of my professional develop” ($M = 4.06$; $SD = .95$) state that HEAs feel supported by their supervisors and institutions and are comfortable with investing their time to complete professional development. While there were not statistically significant group differences, this was supported in the qualitative feedback because one of the two dominant themes showed that HEAs were supported at the institutional and supervisory levels with available time, funds, and other resources for professional development. Similarly, HEAs ranked “I invest my own money in my professional development” ($M = 3.34$; $SD = 1.31$) the lowest of the items and illustrated this theme in the feedback, stating they prioritize professional development even if the resources and support is not available from their supervisor or institution. This was also seen in the predominant theme from the feedback: institutional limitations. Many of the HEAs reported being limited in budget, time, and opportunities for professional development.

Research Question 2: Is there a significant relationship among HEAs’ professional identity, perceived supervisor’s leadership style, professional development investment, job satisfaction, and work motivation?

Reliability

Prior to performing the standard multiple regression, reliability tests were conducted to evaluate each measure’s internal consistency. The Professional Identity Scale

contained 8 items and produced a Cronbach's Alpha of .84. Unfortunately, the Leadership Styles scale and subscales demonstrated mixed results. The overall Leadership Style scale's 11 items produced a .37 Cronbach Alpha. The Democratic leadership style subscale composed the highest Cronbach's Alpha of .78 with its 3 items. The other three styles' subscales, Authoritarian (3 items; $\alpha = .50$), Laissez-Faire (2 items; $\alpha = .43$), and Bureaucratic (3 items; $\alpha = .50$), scored more poorly in the test. Cronbach alphas for the 20 Job Satisfaction and 18 Work Motivation items scored highly at .90 and .80 respectively. The Professional Development Investment scale's 13 items also scored highly reliable with a Cronbach Alpha of .85. The new variables, Professional Development Investment – Self and Professional Development Investment – Other, scored alphas of a moderate .66 and high .89 respectively.

Exploratory Factor Analysis

Following this analysis, an EFA was conducted to determine the factorability of the Professional Development Investment scale's 13 items. A principal components analysis was conducted with a varimax rotation to determine the scale's dimensionality by identifying its potential underlying factors. The initial analysis illustrated 3 components' eigen values that represented 29%, 17%, and 17% of variance respectively. However, after reviewing the Scree Plot and Component Matrix's cross-loadings, it appeared that 2 components would provide a simpler factor structure. The resulting analysis' initial eigen values accounted for 37% and 17% of variance respectively. The 2 components were divided between items referencing the HEA personal/self items (4) and institutional and supervisor related items (9), all with factor loadings of .50 and above. These subscales,

Professional Development Investment – Self with 4 items and Professional Development Investment – Other with 9 items, performed internal consistency Cronbach Alpha scores of a moderate .66 and high .89. Removing items would not have increased the alpha scores substantially.

Standard Multiple Regression

A standard multiple regressions was then conducted to determine if leadership styles, job satisfaction, work motivation, and professional development investment were predictors of HEAs professional identity. Of the leadership style variables, only Leadership – Democratic was included in the analyses due to low Cronbach’s Alpha scores of the other three leadership subscales and the respondents indicated they experienced this style’s characteristics most often. Pearson r correlations were conducted to view the relatedness between the variables prior to conducting the multiple regression. Professional Identity was significantly correlated with the Job Satisfaction ($r = .43, p < .001$), Work Motivation ($r = .34, p < .001$), Professional Development Investment - Self ($r = .37, p < .001$), and Professional Development Investment – Other ($r = .28, p < .001$) variables. Professional Identity was not significantly correlated with the Democratic leadership style. While these results show that the variables can be included in the standard multiple regression analysis, the correlations are less than optimal. Regression analysis works most effectively when the independent variables are highly correlated with the dependent variable and show lower correlations with each other (Tabachnick & Fidell, 2014). Table 6 presents the Pearson correlation results among the study’s variables.

The standard multiple regression, $F(5, 242) = 28.074, p = <.001, R = .61$ and $\text{Adj. } R^2 =$

Table 6*Pearson Correlations Between Regression Variables*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Professional Identity	250	4.07	0.60	-					
2. Leadership Style – Democratic	249	4.18	0.76	.07	-				
3. Job Satisfaction	250	3.89	0.55	.43**	.58**	-			
4. Work Motivation	250	3.37	0.49	.36**	.02	.21**	-		
5. Professional Development Investment - Self	249	4.18	0.62	.37**	.04	.10	.21**	-	
6. Professional Development Investment - Other	250	3.97	0.72	.28**	.53**	.60	.10	.15*	-

* $p < .05$. ** $p < .01$.

.35, was significant, indicating the set of independent variables significantly predict Professional Identity, but they only account for 35% of change in it. The fitted regression model was $Y = .83 - .20X_1 + .49X_2 + .23X_3 + .28X_4 + .07X_5 + e$. Further review illustrated that the variables Leadership – Democratic ($\beta = -.26$, $sr_i^2 = .04$), Job Satisfaction ($\beta = .46$, $sr_i^2 = .11$), Work Motivation ($\beta = .19$, $sr_i^2 = .05$), and Professional Development Investment – Self ($\beta = .29$, $sr_i^2 = .08$) were showing significance. This indicates that these variables are significant predictors of Professional Identity, with Job Satisfaction as the best predictor. HEAs will experience an increase in professional identity as their job satisfaction, work motivation, and self-professional development investment increase. Notably, the Democratic leadership style demonstrated a negative beta coefficient in the results and the squared semi-partial correlations were very low. This indicates that the style decreases HEAs' professional identity and may have little practical significance for the HEA field. However, considering the Pearson correlation results and the regression analysis' sensitivity to its combination of variables (Tabachnick & Fidell, 2014), additional research is needed to determine if these results are an accurate representation of professional identity predictors. Table 7 illustrates the full results of the standard multiple regression.

Table 7*Predictors of HEAs Professional Identity Model*

Variable	B	β	sr_i^2
Leadership Style – Democratic	-.20	-.26***	.04
Job Satisfaction	.49	.46***	.11
Work Motivation	.23	.19***	.05
Professional Development Investment - Self	.28	.29***	.08
Professional Development Investment - Other	.07	.08	.00

Note. $R = .61$ and $Adj. R^2 = .35$ ($N = 247, p < .001$)

*** $p < .001$

Chapter Summary

Chapter 4 described the findings of this study. The data cleaning and analysis preparation was listed in detail. The analyses results of the two research questions were discussed in depth. This included quantitative analyses, such as descriptive, frequency, and inferential statistics, and qualitative thematic analyses for Research Question 1 and reliability, exploratory factor analysis, and standard multiple regression for Research Question 2. Figure and table data visualizations were created and included as well. Chapter 5 contains a discussion of the study's results and implications.

Chapter 5: Discussion

Summary of Results

The following chapter provides the results summary for the study's five constructs from the research questions: 1) Professional Identity, 2) Leadership Styles, 3) Job Satisfaction, 4) Work Motivation, and 5) Professional Development Investment. To wrap the chapter up, the study's limitations, implications, and potential future research are discussed.

Professional Identity

Over 80% of the HEAs agreed or strongly agreed that they felt like a member of the higher education assessment field, however, the study's holistic data on professional identity provided a mixed perspective on the concept. It is possible that this measure and set of open-ended questions may not have completely captured the concept as it applies to HEAs. For example, professional identity research is still new in higher education assessment (Prendergast et al., 2022; Polychronopoulos & Clucas Leaderman, 2019) and asking if they feel like a member of the field may not be the best or most comprehensive approach. Because, while this level of overall agreement was seen in the quantitative results, the qualitative feedback HEAs provided described a different viewpoint where one of the prominent themes was that many HEAs worked in assessment but do not identify as an HEA. This reflects previous research where the field was indecisive about the construct and how dynamic and unstable it can be in an HEA's professional journey (Chen & Reay, 2021; Kehm, 2013; Prendergast, et al., 2022; Trede et al., 2012). Respondents' professional identity qualitative theme of being an "accidental" HEA that "fell" into assessment supports

these mixed results due to the eclectic academic backgrounds of HEAs (Clucas Leaderman & Polychronopoulos, 2019; Polychronopoulos & Clucas Leaderman, 2019), even though they stated their skillsets from the backgrounds benefitted their work (Prendergast et al., 2022) and supported their overall, predominant theme to have a positive impact on higher education.

While the quantitative results provided a glimpse into how connected HEAs' feel with the assessment field, the qualitative results from the open-ended questions provided key insights to how those connections were made. The dominant theme from the professional identity and overall comments open-ended questions, what does it mean to and what informs it for HEAs, was the positive impact they can have on the higher education community, supporting the findings of Ariovich et al. (2019). HEAs thrived on the "opportunity to invest in student lives," "value[d] continuous improvement," and enjoyed using the assessment process to help faculty and the institution. Furthermore, the current study's work motivation results demonstrate an overwhelming theme of supporting and impacting students, faculty, and institutions. HEAs' responses outlined the necessary themes they needed to meet the demand of providing the support.

The importance of HEAs' strong methodological and interpersonal communication skillsets and disposition themes were clearly depicted in the most common themes that informed respondents' professional identity. Reiterating the work of Ariovich et al. (2019), respondents noted the use of their methodological skills as the top theme that informs their professional identity. In addition, interpersonal skills were specifically discussed by HEAs as essential to collaboration and building relationships with the higher education

community (Ariovich et al., 2019; Clucas Leaderman & Polychronopoulos, 2019). These skillsets were chosen by HEAs to improve themselves, either through their academic background or after starting an HEA position, are reflective of and overlap in several of the roles that Jankowski and Slotnick (2015) determined HEAs fulfillment. The skills also illustrate the HEAs' desire to feel competent in either the academic background they started in or to experience growth within their assessment position, a component of Self-Determination Theory (SDT) (Ryan & Deci, 2017). Notably, if there are skillsets that are preferred or sought out by HEAs, this supports the works of Morrow et al. (2022), Christen et al. (2023), and Horst and Prendergast (2020) that there can be "essential" skillsets and dispositions determined for the field and professional development (PD) can be designed to support HEAs.

Professional networking was identified as a top theme that informed HEAs' professional identity. Respondents advised they felt building relationships and being a "connector" "between members of higher education, both internal and external to their institution. HEAs stated that it was important to them to build interpersonal relationships with faculty and others on campus, as stated in Ariovich et al. (2019) and Clucas Leaderman and Polychronopoulos (2019), but they noted that building a network and communicating with those that similar positions made them feel the most connected to the field (Ryan & Deci, 2017). Unfortunately, the item "I feel I have strong ties with members of this profession" obtained the lowest score on the professional identity measure from respondents ($M = 3.40$; $SD = 1.10$), indicating there is a definite need to establish and cultivate these relationships in the assessment field (Ariovich et al. 2018, 2019). HEAs

stated they use their professional relationships to avoid isolation created by lack of assessment culture, promote collaborations for projects, and exchange resources (Ariovich et al., 2018, 2019; Clucas Leaderman & Polychronopoulos, 2019). These results show that there is a need for more consistent communication among HEAs outside of the annual conferences. Assessment organizations need to ally at the national, regional, and state levels to build an assessment consortium that fosters the relationships between HEAs in all content areas.

Lastly, the standard multiple regression indicated which constructs were predictors of professional identity. The overall results illustrated that a democratic leadership style was a significant predictor of professional identity. This is unsurprising, as literature states that democratic leaders create an environment that supports productivity, satisfaction, and commitment (Kelly & MacDonald, 2016; Puni et al., 2014). Thus, it is also unsurprising that job satisfaction and work motivation were also predictors of professional identity, with job satisfaction as the most statistically significant. These constructs have been noted in prior research as increasing in Democratic leadership types of environment (Canrinus et al., 2011; Judge et al., 2017; Lawler & Hall, 1970; MacDonald et al., 2014). The Professional Development Investment – Self variable was also listed as a predictor. This is understandable because it connects to previous research that stated professional development investment was complementary to motivation (Abakah, 2023; Darvin & Norton, 2017). Interestingly, the Professional Development Investment – Other variable was not indicated as a significant predictor even though it was statistically significantly correlated with Professional Identity. More research is needed to investigate this

relationship and to determine how or if moderating variables affect the predictors of this construct.

Leadership Styles

The Leadership Styles analyses provided a view into the most common leadership characteristics and styles that HEAs experience. In the qualitative analyses, the Democratic and Laissez-Faire leadership styles encompassed almost all the highest rated items, illustrating that their characteristics appear the most often in HEAs' leaders. The characteristics of engaging in communication, encouragement, being hands-off, and leaving decision-making power to employees demonstrate an environment of relationship-building and autonomy capacity for employees, essential concepts in SDT (Ryan & Deci, 2017). Further, the major themes from the open-ended question's qualitative feedback exemplified these leader characteristics: provides autonomy, is supportive and trusting of the employee, and skilled in interpersonal communication. In reflection of SDT (Deci et al., 2017), respondents felt that their supervisor's support for autonomy, ability to build relationships, and trusting them to make decisions "increases their productivity and efficiency" and builds toward meaningful assessment processes at their institution (Kinzie, Jankowski, & Provezis, 2014).

This dedication to interpersonal communication with employees and the lack of a need to control them are key identifiers of the two leadership styles, especially the Democratic "participatory" style (Kelly & MacDonald, 2016, p. 434; Mullins, 1999). In previous research, these styles are connected to increased job satisfaction, motivation, and solidarity in the workplace (Hackman & Oldham, 1976; Kelly & MacDonald, 2016; Puni et

al., 2014), and potentially why the Democratic style, job satisfaction, and motivation variables were noted as predictors of HEAs' professional identity. However, the Democratic leadership style was a negative predictor of professional identity. Alternately, the authoritarian and bureaucratic leadership style characteristics were among the lowest-ranked items in the analysis, showing that these occur less often in HEAs' leaders. These results also support the increased job satisfaction because these styles are associated with lower satisfaction and increased burnout in employees (Kelly & MacDonald, 2016).

Job Satisfaction

HEAs rated their overall job satisfaction moderately high with a mean of 3.89 ($SD = .55$). Notably, the items regarding freedom to use their own judgment and the chance to use their own abilities and methods for the position were among those with highest level of agreement. These items are associated with SDT's autonomy and competence concepts (Ryan & Deci, 2017), and demonstrate that they increase job satisfaction. Likewise, the opportunity to support others and their relationships with their co-workers were highly ranked and illustrate their need to feel belongingness within their position (Ryan & Deci, 2017).

The construct's open-ended question for qualitative feedback reinforced these results and provided additional information on what supports HEAs' job satisfaction. The prominent themes were positive and negative in nature, in agreement with how individuals evaluate their job or job situation (Weiss, 2002). The positive themes that increased respondents' job satisfaction included that they feel like they are respected for their expertise and that they are part of a professional network. This supports the descriptive

statistics' SDT results that HEAs need to feel connected and appreciated in their roles (Ryan & Deci, 2017).

However, these themes were overshadowed in the negative results that decreased HEAs' job satisfaction: position limitations and assessment within their organization needs to be valued more. Respondents stated that these institutional level concepts affected their job satisfaction most often. Position limitations were demonstrated in this theme and with the job satisfaction measure' lowest mean score on the item "The chance for advancement on this job" ($M = 2.92$; $SD = 1.16$), with only 34% feeling satisfied or very satisfied with the advancement potential as an HEA. Many HEAs commented that they quickly met the assessment "glass ceiling" at their institution and were considering leaving higher education. Similarly, other respondents advised they had already moved to new institutions and cities due to lack of promotion and advancement options. Creating a promotion ladder or another method for career advancement needs to be prioritized in the assessment field.

HEAs also advised that assessment needed to be valued more on campus and they should not have to "fight for a seat at the table" just to combat the negative "compliance stigma" around assessment. Lack of an assessment culture was one of the top themes in respondents' overall comments that they wished they could change. The statistically significant *t*-test results with the Community College/Technical School and 4-year University/College variables could be an example of this situation, because HEAs at 4-year universities/colleges rated themselves higher in Job Satisfaction. The current study had difficulty locating and contacting community college and technical school HEAs. The lack of

resources devoted for assessment at institutions at this level may affect networking and professional networking, essentially cutting them off from the assessment community. With job satisfaction being noted as the best predictor of professional identity in this study, these themes do not support an environment that will help build professional identity for HEAs. If HEAs move positions, supervisors, and fields entirely, they do not have the time to build the relationships and SDT's needs necessary to be a successful HEA (Clucas Leaderman & Polychronopoulos, 2019; Kinzie, Jankowski, & Provezis, 2014; Ryan & Deci, 2017).

Work Motivation

Respondents reported a moderate level of work motivation on the measure ($M = 3.36$; $SD = .49$) and provided the dominant theme for their motivation as an HEA. Items that focused on learning new things, taking new challenges, and building skills were highly rated by HEAs, attributing these concepts as the primary drivers for their work motivation. This supports the HEAs' SDT needs to continually improve themselves and their expertise (Ryan & Deci, 2017). In the open-ended qualitative feedback, respondents demonstrated additional support for this concept and provided a predominant theme for their work motivation. While concepts from the measure appeared in respondents' comments (e.g., benefits, work and life balance), the majority of HEAs advised that making an impact on and supporting members of the higher education community was their primary motivation (Ryan & Deci, 2017). Many HEAs stated that these relationships and connections keep them rooted in higher education assessment despite negative perceptions of the field (Ryan & Deci, 2017). Initially it appeared that the quantitative and qualitative results were

contradictory, but both results depict separate SDT needs (Ryan & Deci, 2017). Reflectively, however, a different measure that includes more specific items regarding relationships with people, that can be implied as partners in higher education community, would be a better work motivation assessment for HEAs.

Professional Development Investment

HEAs demonstrated high levels of professional development investment, reporting that 97% agree or strongly agree that focusing on development is important to them. In addition, other highly rated items were centered around HEAs' personal investment in PD, such as investing their time, money, technology, and other resources. This indicates that HEAs have a strong need to improve their skillsets and increase competence in their role, regardless of the level of support by their supervisor or institution (Ryan & Deci, 2017). Fortunately, HEAs also highly agreed that their supervisor and institution were supportive of their PD, and this was also reiterated in the open-ended qualitative feedback. However, the feedback also noted HEAs' PD's dominant theme and issue: institutional limitations in budget, time, opportunities, etc. HEAs described having limited budgets, heavy workloads, and competing with other colleagues for opportunities. Specifically, some HEAs stated they felt misunderstood when asking for PD opportunities, because assessment is misunderstood and a "hidden field" at their institution. In addition to building a better assessment culture to make them feel included (Ryan & Deci, 2017), these issues show institutions that HEAs need to have more autonomy through additional resources and opportunities to create a proactive approach to PD to feel competent (Brancato, 2003; Ryan & Deci, 2017).

Without these contributions to employees, especially HEAs that were shown in this study to highly value learning and reinforcing their skillsets, institutions will see lower rates of job satisfaction and higher rates of turnover and burnout (Allen et al., 2010; Özer & Beycioglu, 2010; Shuck et al., 2014; Wells, 2020). With job satisfaction, work motivation, and professional development investment, a complementary concept to motivation (Abakah, 2023; Darvin & Norton, 2017), being listed as predictors, these issues would also affect HEAs' ability to create and build a professional identity, and potentially hinder the field's ability to move forward. The higher education community needs to prioritize reciprocating the investment and support that the HEAs continuously provide it.

Limitations

The first limitation of the study is that the sample is potentially not representative of all HEAs in the United States. The higher education assessment field does not have a full definition, professional identity, and collective locations for members currently. As such it is difficult to ascertain the full scope of the population to know if the sample is representative. Several variables, such as Race, Gender, Institution Size, and Supervisor's Job Title, had to be re-coded or have some selections removed from analysis due to low response rates. This limited group analyses in the study. Second, there are potential limitations on the Professional Identity, Leadership Styles, and Work Motivation measures. The measures may not have obtained all the necessary data to produce the holistic results intended in the study. It is unknown if the professional identity measure and questions fully asked HEAs about their professional identity, the leadership styles measure was limited in the data it collected, and, upon reviewing the quantitative and qualitative results,

the work motivation measure needed to include more people and relationship concepts. Finally, self-report surveys have the potential to collect problematic data due to social desirability bias and not obtaining in-depth data like focus groups or interviews (Robinson & Leonard, 2019). Purposeful survey design was followed and open-ended questions were provided in each section to mitigate these issues (Robinson & Leonard, 2019).

Implications

The current study illustrates that HEAs have additional discussions and research to conduct before fully forming a professional identity and assessment field standards. Assessment leaders and organizations (e.g., AALHE, SAAL, etc.) need to work together to create a more intentional structure for communication, connections, and scholarship among HEAs. This would provide more opportunities for collaborations and PD offerings in the future. As seen in this study, it appears that the current structure (or lack thereof) among the assessment organizations is not providing sufficient opportunities in these areas. These opportunities will be crucial in moving the field forward and eventually aid in its academic and public recognition.

However, institutional and supervisory issues may also delay this process. At the institutional level, the overall assessment culture needs to be addressed by presenting assessment as a support for the higher education community instead of just a requirement for compliance. As part of this, the recognition of HEAs for their expertise, pay commensurate with their skills and experience, PD opportunities comparable to others in academia (such as other administrators at the same level on campus), and the creation of more promotion and advancement opportunities is necessary. Otherwise, HEAs will

continue to move to other universities and roles and take their knowledge and experience with them to achieve a higher rank and salary.

The effect of an HEA's supervisor's leadership style should be considered. Supervisors have the power to influence an HEA's position and day-to-day life, in potentially positive and negative ways. The first "front-line" supporter for an HEA, creator of a successful work environment, and advocate for assessment culture will be the supervisor. Most of the HEAs in this survey identified the Democratic and Laissez-Faire leadership styles' characteristics most often. These support job facets such as job satisfaction and effective work environments by maintaining open communication and autonomy in their work environments (Kelly & MacDonald, 2016; Puni et al., 2014). However, not all HEAs were fortunate to have this work environment. There should be measures in place, such as policy, procedures, and PD encouraging open communication and autonomy, to support HEAs in these situations.

Future Research

The study assessed the influences of HEAs professional identity by investigating the relationships among their professional identity, supervisor leadership styles, job satisfaction, work motivation, and professional development investment. Further investigation regarding the constructs is warranted, including analyses of the data with moderating variables, such as respondent job title, institution size, additional in-depth analysis of qualitative feedback from HEAs regarding their professional identity development, and more professional identity research for clarification of skillsets, dispositions, and PD to support HEAs' professional growth. Future studies should also

endeavor to obtain the most representative samples possible for generalizability, especially for demographics such as race, gender, etc. Subsequent studies will also need to ensure that community college and 2-year technical schools have an improved HEA representation in them. Finally, additional concepts and alternative measures on this study's constructs could be used to research their relationships with HEAs' professional identity, such as sense of belonging and intention to remain in our field.

Chapter Summary

Chapter 5 provides the summary of results and discussion for the study's five constructs from the research questions: 1) Professional Identity, 2) Leadership Styles, 3) Job Satisfaction, 4) Work Motivation, and 5) Professional Development Investment. To wrap the chapter up, the study's limitations, implications, and potential future research were discussed.

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Appendices

Appendix A: Recruitment Email

Subject Line: Higher Education Assessment Professionals – We Need Your Feedback!

Hello,

We invite higher education assessment professionals with either a primary or secondary job role in this area to participate in a dissertation research study at the University of Tennessee, Knoxville about their perceived professional identity, supervisor leadership style, job satisfaction, work motivation, and professional development investment. This study consists of a brief online survey about these perceptions, which should take about 15-20 minutes to complete.

This study has minimal risks, and the researchers will keep responses anonymous. All potential participants that agree to participate will have \$1 donated on behalf of their completed survey submission to the Association for the Assessment of Learning in Higher Education (AALHE) Graduate Student Travel Award (<https://aalhe.memberclicks.net/donations>).

Up to \$500 total will be donated to the award for completed surveys.

Your participation is voluntary. If you wish to participate in this study, please click on the link below:

tiny.utk.edu/HEASurvey

Do you know of an assessment professional that might be interested in participating? Please feel free to pass this survey link along to them!

Thank you in advance!

Nikki Christen

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Appendix B: Recruitment Flyer

HIGHER EDUCATION ASSESSMENT PROFESSIONALS NEEDED FOR DISSERTATION RESEARCH STUDY

This study at the University of Tennessee, Knoxville will investigate higher education assessment professionals' (HEAs) status on professional identity and its relationships to their supervisor's leadership style, job satisfaction, work motivation, and professional development investment. The results will be used to better understand HEAs professional identity status, the work environments they experience, and how to aid in planning future professional development.



WHO IS ELIGIBLE

Higher education professionals with either a primary or secondary job role in assessment.



DESCRIPTION OF STUDY

Participants will complete a 15-20-minute anonymous online survey. There are no anticipated risks or benefits to completing the survey.



All potential participants that agree to participate will have \$1 donated on behalf of their completed survey submission to the Association for the Assessment of Learning in Higher Education (AALHE) Graduate Student Travel Award (<https://aalhe.memberclicks.net/donations>). Participants will not be named; all submissions will remain anonymous. Up to \$500 total will be donated to the award for completed surveys.



HOW TO PARTICIPATE?

Scan the QR code below or click this link: tiny.utk.edu/HEASurvey



QUESTIONS?

Please email Nikki Christen at rchris13@vols.utk.edu or Dr. Jennifer Morrow at jamorrow@utk.edu.



Appendix C: Social Media Recruitment Statement

We invite higher education assessment professionals to complete a 15–20-minute anonymous online survey about their perceived professional identity, supervisor leadership style, job satisfaction, work motivation, and professional development investment. To participate in this research study survey from the University of Tennessee, Knoxville, visit **tiny.utk.edu/HEASurvey**.

All potential participants that agree to participate will have \$1 donated on behalf of their completed survey submission to the Association for the Assessment of Learning in Higher Education (AALHE) Graduate Student Travel Award (<https://aalhe.memberclicks.net/donations>). Participants will not be named; all submissions will remain anonymous. Up to \$500 total will be donated to the award for completed surveys.

Please contact Nikki Christen (rchr13@vols.utk.edu) or Dr. Jennifer Ann Morrow (jamorrow@utk.edu) with any questions.

Appendix D: Informed Consent Form

Research Study Title: Higher Education Assessment Professionals' Professional Identity Development and Its Influences

Researcher(s):

Nikki Christen, University of Tennessee, Knoxville

Jennifer Ann Morrow, Ph.D., University of Tennessee, Knoxville

The following information is provided to inform you about this research project and your participation in it. The information in this consent form is to help you decide if you want to participate in this research study. Please read this form carefully and feel free to ask any questions you may have. Your participation is voluntary, and there is no penalty for refusing to complete this survey.

Why is the research being done?

The dissertation research study aims to learn more about assessment professionals' perceived professional identity and its relationships to their supervisor's leadership style, job satisfaction, work motivation, and professional development investment.

What will I do in this study?

Your participation in this research study consists of an anonymous online survey asking about your perceptions of your professional identity, supervisor's leadership style, job satisfaction, work motivation, and professional development investment. The survey should take you about 15-20 minutes to complete. This study has minimal risks, and the researchers will keep all responses anonymous. If you want to learn more about this study, please continue reading below.

Participation

Participation in this study is completely voluntary; you may decline to participate without penalty. If you become uncomfortable sharing your perceptions of your professional identity, supervisor's leadership style, job satisfaction, work motivation, and professional development investment throughout the survey, then you are free to skip any question or stop the survey at any time without penalty and without any loss of benefits to which you are otherwise entitled. If you do not wish to participate in this research study, close the web browser window.

Risks

The level of risks associated with the current study is minimal. You may feel uncomfortable sharing your perceptions of your professional identity and its relationships to your supervisor's leadership style, job satisfaction, work motivation, and professional development investment; however, please know that your information will be kept completely anonymous with the research team. If you feel discomfort at any time, you may choose to terminate your participation in the study.

Confidentiality

The information you enter through the survey will be kept completely anonymous. Only researchers will have access to your answers. The data will be stored on secure password-protected computers owned by the study's researchers and/or the University of Tennessee. This consent form will be stored in UT's IRB-approved and password-protected survey platform. No references will be made in any reports that could link you as a participant to the study or the data.

Are there any benefits to me?

We do not expect you to benefit from being in this study.

Will I be paid for being in this research study?

All potential participants that agree to participate will have \$1 donated on behalf of their completed survey submission to the Association for the Assessment of Learning in Higher Education (AALHE) Graduate Student Travel Award (<https://aalhe.memberclicks.net/donations>). Participants will not be named; all submissions will remain anonymous. Up to \$500 total will be donated to the award for completed surveys.

Who can answer questions about this research study?

If you have questions or concerns about this study or have experienced a research related problem or injury, contact the researchers Nikki Christen (rchris13@vols.utk.edu) or Dr. Jennifer Ann Morrow (jamorrow@utk.edu).

For questions or concerns about your rights or to speak with someone other than the research team about the study, please contact:

Institutional Review Board

The University of Tennessee, Knoxville

1534 White Avenue Blount Hall, Room 408

Knoxville, TN 37996-1529

Phone: 865-974-7697
Email: utkirb@utk.edu.

CONSENT

Please choose the option below that best represents your consent and click the “Next” button to submit your answer.

- a) I **agree** to participate in the research study.
- b) I **do not agree** to participate in the research study.

Branching (if option a selected): [branches to online survey for main study]

Branching (if option b selected): Thank you for your time! Do you know of an assessment professional that might be interested in participating? Please feel free to pass this survey link along to them! **[survey link to appear here]**

You may now exit out of your web browser.

Appendix E: Survey

Higher Education Assessment Professionals' Professional Identity and Its Influences Survey

Thank you for your interest in participating in the study! We want to learn more about higher education assessment professionals' perceived professional identity and its relationships to their supervisor's leadership style, job satisfaction, work motivation, and professional development investment. You are invited to participate in this research study, which consists of a 15-20-minute anonymous online survey. All potential participants that agree to participate and answer questions on the survey will have \$1 donated on their behalf to the Association for the Assessment of Learning in Higher Education (AALHE) Graduate Student Travel Award (<https://aalhe.memberclicks.net/donations>). Up to \$400 in total will be donated to the award.

If you want to participate, please click the "arrow" below to proceed to the consent form. We appreciate your interest in our project! Next->

[Consent Form Inserted Here]

HIGHER EDUCATION ASSESSMENT PROFESSIONAL IDENTITY

The following section includes questions that seek to understand your level of professional identity as an HEA.

Q1: For the following section, reflect on your experience as an assessment professional working at a higher education institution.

Please rate how strongly you agree or disagree with the following statements.

Scale: 1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree,
4 = Agree, 5 = Strongly Agree

Scale was listed for each item in a matrix table	
I feel like I am a member of this profession.	
I feel I have strong ties with members of this profession.	
I am often ashamed to admit that I am working in this profession.	
I find myself making excuses for belonging to this profession.	
I try to hide that I am working in this profession.	
I can identify positively with members of this profession.	
Being a member of this profession is important to me.	
I feel I share characteristics with other members of the profession.	

Q2: What does it mean to you to have a professional identity as a higher education assessment professional?

Q3: What do you think has influenced your professional identity as a higher education assessment professional?

(% completed status bar)

Next->

LEADERSHIP STYLE OF YOUR IMMEDIATE SUPERVISOR

The following section includes questions that seek to understand the leadership style of your immediate supervisor.

Q4: Please rate how often the statements below are true for your immediate supervisor:

Scale: 1 = Never True, 2 = Rarely True, 3 = Sometimes True, 4 = Often True, 5 = Always True

My supervisor...

Scale was listed for each item in a matrix table	
Communicates with their employees mostly to convey directions	
Encourages their employees' input in decisions	
Engages in communication with their employees	
Is hands-off	
Is impersonal with their employees	
Is very focused on tasks	
Leads entirely by the rules	
Leaves decision-making and problem-solving power to their employees	
Makes most decisions without group discussion	
Relies on regulations	
Tries to be a leader	

Q5: Is there anything else that you would like to tell us about your immediate supervisor's leadership style?

(% completed status bar)

Next->

JOB SATISFACTION

The following section includes questions that seek to understand your level of job satisfaction in your role as an HEA.

Q6: For the following section, reflect how you feel about your present job, what things you are satisfied with and what things you are not satisfied with.

Please rate how strongly you are satisfied or not satisfied with the following aspects.

Scale: 1= Very Dissatisfied, 2 = Dissatisfied, 3 = Neither Satisfied nor Dissatisfied,
4 = Satisfied, 5 = Very Satisfied

Scale was listed for each item in a matrix table	
Being able to keep busy all the time.	
The chance to work alone on the job.	
The chance to do different things from time to time.	
The chance to be "somebody" in the community.	
The way my supervisor handles his/her employees.	
The competence of my supervisor in making decisions.	
Being able to do things that don't go against my conscience.	
The way my job provides for steady employment.	
The chance to do things for other people.	
The chance to tell people what to do.	
The chance to do something that makes use of my abilities.	
The way company policies are put into practice.	
My pay and the amount of work I do.	
The chances for advancement on this job.	
The freedom to use my own judgment.	
The chance to try my own methods of doing the job.	
The working conditions.	
The way my co-workers get along with each other.	
The praise I get for doing a good job.	
The feeling of accomplishment I get from the job.	

Q7: Is there anything else you would like to share with us about your job satisfaction?

(% completed status bar)

Next->

WORK MOTIVATION

The following section includes questions that seek to understand your level of work motivation in your role as an HEA.

Q8: Using the scale below, please indicate to what extent each of the following items corresponds to the reasons why you are presently involved in your work.

Scale: 1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree,
4 = Agree, 5 = Strongly Agree

Scale was listed for each item in a matrix table	
Because this is the type of work I chose to do to attain a certain lifestyle.	
For the income it provides me.	
I ask myself this question, I don't seem to be able to manage the important tasks related to this work.	
Because I derive much pleasure from learning new things.	
Because it has become a fundamental part of who I am.	
Because I want to succeed at this job, if not I would be very ashamed of myself.	
Because I chose this type of work to attain my career goals.	
For the satisfaction I experience from taking on interesting challenges.	
Because it allows me to earn money.	
Because it is part of the way in which I have chosen to live my life.	
Because I want to be very good at this work, otherwise I would be very disappointed.	
I don't know why, we are provided with unrealistic working conditions.	
Because I want to be a "winner" in life.	
Because it is the type of work I have chosen to attain certain important objectives.	
For the satisfaction I experience when I am successful at doing difficult tasks.	
Because this type of work provides me with security.	
I don't know, too much is expected of us.	
Because this job is a part of my life.	

Q9: Is there anything else you would like to share with us about your work motivation?

% completed status bar)

Next->

PROFESSIONAL DEVELOPMENT INVESTMENT

The following section includes questions that seek to understand your level of investment in professional development as an HEA.

Q10: Please rate your level of agreement with the following statements about your investment in your professional development as an HEA.

Scale: 1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree,
4 = Agree, 5 = Strongly Agree, 0 =Not Applicable

Scale was listed for each item in a matrix table	
I invest time in my professional development.	
I invest my own money in my professional development.	
My immediate supervisor invests time in my professional development.	
My immediate supervisor invests money in my professional development.	
I invest in other resources (e.g., educational materials, technology, professional memberships) for my professional development.	
My immediate supervisor invests in other resources (e.g., educational materials, technology, professional memberships) for my professional development.	
My immediate supervisor is supportive of my professional development.	
My institution is supportive of my professional development.	
Focusing on my professional development is important to me.	
Focusing on my professional development is important to my immediate supervisor.	
My institution invests resources for my professional development.	
Other assessment colleagues at my institution are supportive of my professional development.	
My organization offers professional development opportunities to enhance my skills.	

Q11: Is there anything else you would like to share with us about your professional development investment?

(% completed status bar)

Next->

OVERALL FEEDBACK

Q12: Is there anything else that you would like to share with us about your role as a Higher Education Assessment Professional?



(% completed status bar)

Next->

DEMOGRAPHICS

The following section includes demographic questions that will be used to describe the participants in this study. Please select “Prefer not to answer” if you do not want to answer any of the questions.

Q13: What is your primary job title in your current role? (Open-ended response)

Q14: What is the job title of your immediate supervisor? (Open-ended response)

Q15: Which of the following best describes the type of institution you work for?

- <2-year/career & technical school
- 2-year/community college
- 4-year university
- Other: ____ (Open-ended response)
- Prefer not to answer

Q16: Is your institution a minority-serving institution?

- No
- Yes, it is an Asian American and Pacific Islander Serving Institution (AAPISI)
- Yes, it is a Hispanic-Serving Institution (HSI)
- Yes, it is a Historically Black College or University (HBCU)
- Yes, it is a Tribal College or University (TCU)
- Other: ____ (Open-ended response)
- Prefer not to answer

Q17: Please select the response that best describes your institution:

- Public
- Private Nonprofit
- Private For-Profit
- Other: ____ (Open-ended response)
- Prefer not to answer

Q18: Please select the response that best describes the size of your institution:

- Very Small: < 1,000 students
- Small: 1,000 – 4,999 students
- Medium: 5,000 – 9,999 students
- Large: 10,000 - 19,999 students

- Very large: 20,000+ students
- Other: ____ (Open-ended response)
- Prefer not to answer

Q19: Please select the response that best describes the size of your assessment unit:

Note: Full-time employees can be assessment professionals and other professionals

(i.e., administrative, supervisors, etc.).

- Small: 1-2 full-time employees
- Medium: 3-5 full-time employees
- Large: 6+ full-time employees
- Other: ____ (Open-ended response)
- Prefer not to answer

Q20: What percent of effort in your current role is devoted to work as an assessment professional?

- 0%-25%
- 26%-50%
- 51%-75%
- 76%-100%
- Other: ____ (Open-ended response)
- Prefer not to answer

Q21: If your percentage of effort on assessment is less than 100%, what is your percentage of effort for:

- ____ administration
- ____ advising
- ____ institutional research
- ____ teaching
- ____ Other: ____ (Open-ended response)
- ____ Prefer not to answer

Q22: What is your highest degree earned?

- Bachelor's
- Master's
- Doctorate or Professional Terminal Degree
- Other: ____ (Open-ended response)
- Prefer not to answer

Q23: Regarding your highest degree earned, what field of study was it in?

Q24: Which of the following best describes your gender identity?

- Male
- Female
- Non-binary or Gender Queer
- Not listed: _____ (Open-ended response)
- Prefer not to answer

Q25: What is your race? (Select all that apply)

- Alaskan Native
- Asian
- Black or African American
- Native American/Member of Indigenous Tribe
- Native Hawaiian or Other Pacific Islander
- White
- Not listed: _____ (Open-ended response)
- Prefer not to answer

Q26: Do you consider yourself to be Hispanic/Latino?

- Yes
- No
- Prefer not to answer

(% completed status bar)

Submit Survey->

Your responses have been submitted!

Please email Nikki Christen at rchris13@vols.utk.edu or Dr. Jennifer Ann Morrow at jamorrow@utk.edu with any questions or comments about this survey.

Do you know of an assessment professional that might be interested in participating?
Please feel free to pass this survey link along to them!

tiny.utk.edu/HEASurvey

(Close button/notification)

Appendix F: What Does It Mean to You to Have a Professional Identity Top Themes and Responses

Theme	# of Responses	Response Examples
Positive Impact – Student, Faculty, and Institution	33	<p>”I believe it is important to have a professional identity as HEA. I feel like I am making a difference in all aspects of the university. I believe my role allows me to empower the institution to make significant changes.“</p> <p>“It means I identify myself in terms of why this work is important to me...I do this because I want to help faculty and staff learn more about what and how our students learn and thus, contribute to students' success. I believe strongly in the need to continuously evaluate/assess what we do and to look for ways to improve on our work with students.”</p>
Works Within Assessment, but not an Assessment Professional	30	<p>“My professional identity is only in part as an assessment professional. I identify as an academic administrator.”</p> <p>“People outside of higher education have no idea what I do and I don't try to explain it. I identify more as a higher education professional in general. I'm starting to form more of a professional identity within my professional network, however.”</p>

Theme	# of Responses	Response Examples
Professional Network – Needed to avoid isolation, promote collaboration, and exchange resources	27	<p>“To be part of a community of professionals involved in the same work.”</p> <p>“To have colleagues to learn from and share ideas with. To have support and empathy. To not be alone.”</p>
Continuous Improvement	24	<p>“To me, working in assessment means serving as a leader to my university to guide efforts of improvement and educational excellence. I am proud to work with faculty and staff and provide assessment education, support, and service.”</p> <p>“I feel like I can make a difference at our institution by helping to promote evidenced-based decision-making and helping colleagues to see the value in the pursuit of continuous improvement efforts.”</p>
Valuable & Important Work	24	<p>“I find great significance in this role. My entire university looks to me for information on our students and the student experience.”</p> <p>“It means I have a hand in ensuring the university is continuing to move toward its mission. Through assessment, we find what works well and what doesn't, and those results help illuminate the path for our next steps. It feels like important work and I am grateful to have a seat at the table.”</p>

Theme	# of Responses	Response Examples
Disposition – Credibility, dignity, resourceful, problem-solver, high reputation, confident	23	<p>“Dignity, and an opportunity to invest in student lives.”</p> <p>“It means everything. Credibility. Trust. Leadership. Expertise. Respect.”</p>
Data-Driven Decision-Making	22	<p>“As an assessment professional, I hold a meaningful and valuable position. Assessment is an integral part of data-driven decision making which is used extensively in higher education.”</p> <p>“Having a responsibility to ethically tell the story of my constituents through the use of data (students, staff, parents, colleagues) and advocate for the use of the assessment I coordinate to be used to inform decision-making processes”</p>
Skills and Methodologies – Needed & recognized in the field	19	<p>“Identity is complex and I identify in many roles in life. As an assessment professional I believe it is important to recognize my skill set and its application to the varying tasks that unfold over time, and to have my ideas and knowledge of assessment systems recognized as effective by both internal and external stakeholders.”</p> <p>“It means I share a common set of skills and characteristics with other assessment professionals. I feel my professional identity is exclusive to any assessment-related role I hold at an institution.’</p>

**Appendix G: Top Important or Influential Themes and Response Examples in
Forming an HEA Professional Identity**

Theme	# of Responses	Response Examples
Professional Networking - For professional relationships and resources	33	<p>“Specialized knowledge is needed to work successfully in this area, and having acquired that knowledge is part of my professional identity. This also includes knowledge about accreditation requirements. My identity is enhanced by attending conferences held by the AALHE and Middle States. “</p> <p>“I had some good mentors early on who emphasized the importance of teaching and learning. So I came to see that as a focus of a college campus. Assessment as supporting that mission is an easy link to make. I've also met many other assessment folks in academic and student affairs who share this concerns for understanding out impact on students and trying to make that better. These have shaped my identity. “</p>
Methodology Skills - Best use of and known for expertise in use of	33	<p>“Once people started to turn to me to gather, interpret and present data I felt like I had solidified assessment as part of my professional strengths.”</p> <p>“As cliché as it sounds, I am a data nerd. This profession allows me to play with data that has real meaning on our campus and real impact on our students and community.”</p>

Theme	# of Responses	Response Examples
Disposition -Inquisitive, curious, accurate, trustworthy, confident	30	<p>“Being ethical, creative, honest, and transparent in the work that I do.”</p> <p>“Curiosity is so so important. I've always loved things like the science fair, and to me, my job every day is like a science fair project in the best way possible. So I think my identity as an assessment professional is rooted in that idea of questioning, and ‘tell me more’.”</p>
Supportive of Students, Faculty, and Institution	27	<p>“Students reaching their goals. I want to be one of the reasons they completed, not one of the reasons they quit.”</p> <p>“The desire to see improvement and help others along with enjoyment of organizing and analyzing data. I also see having supportive supervisors and colleagues important in forming the identity as an assessment professional, including other assessment professionals, administration, and faculty members.”</p>
Data-Driven Decision-Making	14	<p>“Being self-taught and motivated stand out as important, as well as a commitment to relying on data over anecdote.”</p> <p>“Data driven. Detailed. Focused on continuous improvement. Supports others.”</p> <p>“Providing data-driven proof to leadership to help make decisions.”</p>

Theme	# of Responses	Response Examples
Professional Development - To build upon and strengthen skillsets	14	<p>“Working with colleagues, having conversations about assessment, trainings (attending trainings and hosting trainings for colleagues).”</p> <p>“Authenticity and self-awareness. Ability to identify your strengths and growth areas, coupled with the initiative to seek out professional development opportunities that help you to maximize your strengths and develop your growth areas.”</p>
Interpersonal Communication - With students, faculty, institution, field	13	<p>“Relationship building is essential to success in the work and in benefitting from connecting with others in the profession. Being able to engage, commiserate, celebrate, and collaborate with others in this line of work is incredibly rewarding and allows for people to carve our identity for themselves.”</p> <p>“The ability to build relationships.”</p> <p>“The importance of communicating and listening to others so that I can fulfill a helping role.”</p>

Appendix H: Respondents' Top Immediate Supervisor's Leadership Style Themes and Response Examples

Theme	# of Responses	Response Examples
Provides Autonomy	29	<p>“All good in this area. My supervisor lets me be myself and tells me what to do, not how to do it and is not at all interested in how I spend my time. (Of course, I log it in the HR system on my own). This increases my productivity and efficiency. If my boss was more focused on time, and not outputs or outcomes, they would only get 37.5 hours from me a week. That would be the primary measure of my productivity.”</p> <p>“My supervisor recognizes my experience and leaves me to run assessment processes as I see fit, giving me the autonomy to make changes or have interactions that work best for me.”</p>
Supportive Supervisor	25	<p>“Best boss ever, supports me 100%, listens to ideas, takes time to think about offers, talks about our work/life balance, and shares stories. Includes me in all the right areas and I could not ask for a better boss.”</p> <p>“My immediate supervisor is an amazing champion for me and for the work of my department.”</p> <p>“My supervisor is EXTREMELY supportive of my work.”</p>

Theme	# of Responses	Response Examples
Seeks Input from HEA/team	14	<p>“[My supervisor] is very open to input from the team whether it agrees or disagrees with the current ideas.”</p> <p>“My immediate supervisor is open to hearing dissenting or alternative viewpoints, brainstorming strategies as a team, is supportive, cares about our personal lives.”</p> <p>“My immediate supervisor is very effective and engages others' in decision making regularly.”</p>
Trusts Employees	13	<p>“I love being supervised with quality feedback, and also having decision-making power independently. The trust is established for success.”</p> <p>“I prefer the hands-off approach to micromanaging. It shows trust in me and my work responsibilities.”</p> <p>“My supervisor is fabulous! She is very hands-off in a way that she trusts my abilities to get the job done and improve processes while doing so. She cares so deeply about everyone in our department that it shows. I really could not ask for a better supervisor.”</p>

Theme	# of Responses	Response Examples
Skilled at Interpersonal Communication	11	<p>“Fosters open communication that is truly a dialogue and never feels forced or authoritative. Truly cares about our team.”</p> <p>“My immediate supervisor does a great job of balancing hands-off leadership style and being involved. She also does an excellent job of communicating with those whom she supervises and listening to their opinions, considering their opinions, and ultimately making a decision.”</p>

Appendix I: Respondents' Top Job Satisfaction Themes and Response Examples

Theme	# of Responses	Response Examples
Position Limitations (-) Underpaid/Lack of Advancement	15	<p>“An increase in pay would increase job satisfaction. That is really the major issue I have with my institution.”</p> <p>“Better pay for my team - with so many budget cuts it becomes increasingly difficult for me to feel as though my staff is rewarded the way they should be.”</p> <p>“If there was a clear path to promotion, I would be more satisfied.”</p> <p>“Salary and a clear path for career growth/advancement would make me more satisfied. I am paid less than others on campus doing the same work and raises only come with promotions on our campus, so I have reached my glass ceiling in terms of salary and title on this campus.”</p>
Assessment Needs to be Valued More (-)	11	<p>“The most difficult part of this job is getting others to see its importance and purpose. A lot of people on campus see assessment as just another hoop to jump through, so it can be frustrating to try to help them see the meaning behind the process.”</p> <p>“I would be more satisfied if higher administration [A] had a better understanding that assessment is about improvement and policy change, not just data analysis [B] looked to our assessment team for more policy input and [C] had more of an investment in using assessment to advance equity.”</p>

Theme	# of Responses	Response Examples
Respected for Expertise (+)	6	<p>“The more I educate up, the more value added I receive from my supervisor and division. My professional peers already share their level of respect for my contributions to the profession. My responses would have been drastically more negative under my previous supervisor.”</p> <p>“I feel very appreciated and respected for my knowledge and my work. I'm paid well. But the opportunities for advancement at this institution are not what I am used to from my prior institution. And the levels of bureaucracy within the institution as a whole can make my work difficult. But, not so within my division. I generally like my coworkers and appreciate working with my boss.”</p>
Being Part of a Professional Network (+)	4	<p>“Stronger collaborations with colleagues; having a 'best friend' at work.”</p> <p>“Autonomy: being able to not only work alone but have some power or say in my work. Flexibility: having control over working hours/locations with support from supervisor. Collaboration: being connected with others in my area of expertise as well as those outside of my area among whom we can jointly learn/develop.”</p>

Appendix J: Respondents' Top Work Motivation Themes and Response Examples

Theme	# of Responses	Response Examples
Support & Impact - Students, Faculty, Institution, and Higher Education	44	<p>“As a first-gen college student, my undergraduate education was the most valuable experience of my life. I decided to pursue education and a career in higher education so that I could not only work in a college environment but also play a vital role in the functioning of an institution of higher education for the betterment of ALL students.”</p> <p>“Being an assessment professional allows me the opportunity to impact change and collaborate at an institutional level while also working directly with faculty and staff programmatically.”</p> <p>“Collaboration with others, impact of work on students and programs.”</p>
Benefits - Higher Education or Institution	16	<p>“Flexibility in the job (partial remote work) and benefits of working at a university. Believe in the work and that learning and education is important.”</p> <p>“I like the work I do, but not the context (higher ed) in which I work. I am motivated to stay because I have great immediate colleagues and because of the flexibility and other benefits associated with my job.”</p> <p>“I'm really not very identified with this work, and I don't find it intrinsically rewarding. It gives me a decent paycheck and health insurance.”</p>

Theme	# of Responses	Response Examples
Work & Life Balance	6	<p>“It affords me the flexibility I need to live a balanced life.”</p> <p>“I am in my 50's and have never been stronger and more fit because I can focus on my physical and mental health. I also feel like leadership and faculty respect my work, despite the stagnant career growth for nearly all non-academic staff (a lot of others have left or leaving). So, it keeps me here. If I had a bad boss or it was a toxic environment, I would leave for the corporate environment and help them increase their bottom line.”</p>
Use of Methodological Skills	4	<p>“Yes, I do the work because I am skilled at it and using my experience and skills provides me with deep satisfaction.”</p> <p>“I do this work because I believe it can positively impact student learning and academic success and it can help my colleagues. This work also makes use of a unique set of skills that I have in mathematics, statistics, survey development, accreditation, written comm and curriculum design.”</p>

Appendix K: Respondents' Top Professional Development Investment Themes and Response Examples

Theme	# of Responses	Response Examples
Institutional Limitations - Budget, time, opportunities, supervisor conflicts, etc.	35	<p>“Each department is responsible for their own professional development. Assessment does not have a budget.”</p> <p>“Due to heavy workload and limited office capacity, having time available for professional development during paid working hours is rare despite having a supportive supervisor and the funding for it. The institution is supportive in the sense that they provide the funding for whatever professional development I want to do, but they won't provide additional (and necessary) assessment staffing to free up enough time for it. If I want professional development, I have to do it on top of my regular workload.”</p>
Supported - At Institutional and/or Supervisor Level with Time, Resources, etc.	27	<p>" I am provided with a lot of time and adequate resources for professional development. My leaders are not too involved or interested. They support professional development, but don't know a lot about assessment and evaluation. So they leave it to my judgment and I have a lot of flexibility.”</p> <p>“My institution highly invests in professional development and upskilling for staff and faculty. Tuition remission is easily available internally and externally; executive education courses are free above and beyond tuition remission. I have access to a lot of opportunities to grow professionally.”</p>

Appendix L: Respondents' Top Overall Comment Themes and Response Examples

Theme	# of Responses	Response Examples
<p>Values Assessment - Enjoys its use in supporting the higher education community.</p>	12	<p>"I do my best to pass on tips and tricks, offer mentorship, and consult with folks where and when I can. I believe this work is transformative and beneficial for all higher education educators."</p> <p>"I don't see this as a 'job' - it is a calling, and I'm fortunate to have the opportunity to answer that calling in a supportive institutional environment."</p> <p>"I truly enjoy this work and the potential for significant impact to our campus community."</p>
<p>Assessment Culture - Assessment is not understood, the field is still being built, culture affects processes.</p>	10	<p>"I usually don't refer to myself this way when communicating to people outside of higher education because they don't have any idea what I am talking about. It's a hidden field in the larger society. I identify more as a higher education administrator than assessment professional."</p> <p>"I am fortunate to hold a role at a very supportive institution; however, we struggle with defining what our roles look like and what responsibilities we should have. There is need for a common set of skills and qualities for assessment professionals so that institutions can use these to frame our roles within the institutional context."</p>

Theme	# of Responses	Response Examples
"Accidental" HEA - "Fell" into job, on the job training with other duties, etc.	6	<p>"Like many other HEA professionals, I came to assessment with on the job training. I enjoy the work and working with faculty and programs. I do not enjoy that many folks still see assessment of student learning as an extra requirement and not just something they should do to help students."</p> <p>"I came into it by accident like many HEAPs, but I have found I love it. And I love the community I have discovered as a result of it."</p>

Vita

Nikki Christen traveled a non-traditional path to obtain her postsecondary degrees and build her higher education career. She began her career in law enforcement as an emergency communication officer for several departments, working her way to administrative roles. During this time, Nikki began working with the Tennessee Bureau of Investigation to compile and report her agency's crime statistics. These experiences sparked her research interest, and she enrolled in courses to continue her education.

Nikki obtained degrees to enhance the skills gained in her career. She completed her Associate of Applied Science in Criminal Justice (2005) at Roane State Community College, Bachelor of Science in Sociology with a concentration in Criminal Justice (2011) at Tennessee Tech University, and a Master of Information Science (2013) from the University of Tennessee, Knoxville while working in law enforcement. Upon completing her master's degree, she worked as the Assessment Coordinator position for a college of education for nine years. To further develop her assessment and evaluation capacity, Nikki enrolled in the Evaluation, Statistics, and Methodology doctoral program in 2018. The program has broadened her interests in higher education assessment, survey development, data visualization, and teaching evaluation. In 2022, Nikki began her current position as an Evaluation Specialist for the National Institute for STEM Evaluation and Research (NISER) at the University of Tennessee, Knoxville.