

A QUANTITATIVE COMPARISON OF EMOTIONAL INTELLIGENCE SCORES FOR
GENERATION X AND MILLENNIAL SCHOOL LEADERS

by

April Desjarlais Clark

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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ABSTRACT

The purpose of this quantitative study using a non-experimental, quantitative, and correlational research design, was to discriminate between the emotional intelligence of school leaders in two cohorts: Generation X and the Millennial Generation. Emotional intelligence (the ability to process emotions and emotional stimuli to guide thinking and behavior) was measured using the Mayer-Salovey-Caruso-Emotional-Intelligence-Test. Emails on public school district websites were used to recruit the principals and distribute the survey. The convenience sample consisted of 86 school principals from the northeastern United States. The total emotional intelligence score was significantly higher in the Millennials than Generation X. Discriminant Function Analysis classified the four categories of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) between the two groups of principals. The statistics were weighted to account for the differences in group size. One statistically significant discriminant function explained 100% of the variance. The Millennial Generation were more able than Generation X to understand and manage emotions. The implications are that Millennial principals may be better able than Generation X principals to inspire feelings of trust, cooperation, motivation, optimism, self-confidence, contentment, and commitment among their peers, colleagues and subordinates. More research is needed to examine the degree to which generational and demographic factors predict emotional intelligence among school principals.

Keywords: competence, discriminant factor analysis, emotional intelligence, generations, intelligence, Mayer-Salovey-Caruso Emotional Intelligence Test

Copyright Page

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Dedication

This dissertation is dedicated to my family who has cheered me on throughout my journey. I am grateful for your love and support in all of my endeavors.

Acknowledgments

I want to thank God for giving me the motivation and resources to complete this degree. He created me for academia and gifted me with unending curiosity. Throughout the process, He has reminded me repeatedly to “Lean not on my own understanding.” I am so grateful for what I have learned and the challenges that have made me better.

I want to thank all of the faculty and staff who helped me find my way to a dissertation and a PhD. A special thanks goes to Dr. Casey Reason, my dissertation chair, who talked me off the proverbial cliff multiple times. I am grateful for your calm demeanor, your wisdom, your common sense, and your encouragement throughout the life of this project. And to my committee member, Dr. Wendt: I am grateful for your expertise and your prompt responses to my questions. I always felt confident that following your advice would turn out well, and it did.

A special thanks goes to my editor, self-proclaimed “Dr. Picky.” My aunt, Dr. Mary Ciske, was kind enough to edit my manuscript and even refer to it as “fun.” Thank you for being “picky, picky, picky,” and offering constructive and encouraging feedback!

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List of Abbreviations

Analysis of Variance (ANOVA)

Confidence Intervals (CI)

Discriminant Factor Analysis (DFA)

International Business Machines (IBM)

Institutional Review Board (IRB)

Multivariate Analysis of Variance (MANOVA)

Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)

Normed Fit Index (NFI)

Null Hypothesis Significance Test (NHST)

Root Mean Square Error of Approximation (RMSEA)

Statistical Package for the Social Sciences (SPSS)

Tucker-Lewis Index (TLI)

Variance Inflation Factor (VIF)

CHAPTER ONE: INTRODUCTION

Overview

The purpose of this quantitative study is to discriminate between the emotional intelligence of sitting school leaders in Generation X and the emotional intelligence of school leaders in the Millennial Generation. The researcher contributed to the research about generational similarities and differences among members of the most recent generations, as well as enhance the depth of literature about emotional intelligence and leadership. The background section includes a historical overview of how emotional intelligence has developed over time, a section about society-at-large that explains how emotional intelligence affects contemporary society, and a section about the theoretical basis of the current study. The problem statement justifies the need for additional research regarding emotional intelligence and generational differences. The purpose statement provides information about the research method and variables. The researcher has included a section about the significance of the study to show how the current study will contribute to the bodies of literature about emotional intelligence and generational differences. The chapter concludes with the research questions, definitions to key words, and a summary.

Background

Millennials will dominate the workforce by 2025 (Hernandez et al., 2018). Currently, Millennials are the most populous generation in history (Zachara, 2020). With members of this new generation moving into leadership, they will bring innovative ideas and behaviors (Anderson et al., 2017). Many researchers understand the generation gap to describe how cohorts of individuals are influenced by political, economic, and social conditions of an era (Jena, 2016; Lim & Epperly, 2013; Zachara, 2020). The contemporary work force

is comprised of the Baby Boomers, those born 1946-1964; Generation X, those born 1965-1980; and Millennials, those born 1981-2000 (Hansen & Leuty, 2012; Jena, 2016; Lim & Epperly, 2013). The researcher will use the dates above for the purposes of this research. However, there is disagreement among researchers regarding the years of each generational span (Galdames & Guihen, 2020). As the youngest Baby Boomers reach retirement age, the workforce will be led by Generation X and Millennial members (Twenge et al., 2010).

Research suggests that leaders with elevated levels of emotional intelligence can build trust and cooperation among team members under stressful work conditions (Rezvani et al., 2016). Jiménez (2018) asserted that transformational leaders with the ability to adapt emotions, thoughts, and behaviors are most effective in managing organizational change. Garrick et al. (2014) contended that leaders determine the psychosocial safety climate of a given organization. Psychosocial safety climate is the perception of how an organization protects workers' psychological health and safety (Dollard & Bakker, 2010). Emotional intelligence is an individual's ability to make meaning of emotions, emotional patterns, and emotions' roles in relationships (Mayer et al., 2004). In general, people with high emotional intelligence manage emotions better than others, are open and agreeable, are less likely to engage in destructive behaviors, and have more positive social interactions. They are drawn to careers that require social interactions, like education, for example (Mayer et al., 2004).

Historical Overview

Ideas of emotional security in schools may have begun with Swiss pedagogue Johann Heinrich Pestalozzi in the 18th and 19th centuries (Gutek, 2011). This educational reformer argued that schools must be safe havens first and places of academic learning second. If educators are to be effective for their students, they must first be emotionally healthy themselves. He asserted that

ethical character education emphasized the integration of intellectual, moral, and physical powers. Pestalozzi's ideas of emotional security were based on the relationship between a mother and child, a relationship in which the mother created a positive, loving environment in the home where the child could grow and learn (Gutek, 2011; Laubach & Smith, 2012). Consequently, he employed women to work alongside educators so they could share their maternal wisdom with both the educator and the students (Laubach & Smith, 2012).

Another aspect of Pestalozzi's methods included teaching children within both their cognitive and social dimensions. Students' minds were stimulated by academic material with consideration to their social circumstances (Horlacher, 2011). He wanted to educate impoverished children because he felt they had greater educational needs than children from wealthy families. Pestalozzi spent time with his students at his school, sharing meals and attending field trips (Gutek, 2011). He was actively involved in creating an emotionally secure school environment, which felt much like a loving home, where students felt safe to thrive and learn.

Similarly, Soviet psychologist Lev Vygotsky argued that social interactions were an integral part of the development of awareness within the social-cultural environment (Zimmerman & Schunk, 2003). Teaching and learning are a reciprocal process in which both the teacher and the learner can benefit from interaction. He believed an individual could gain higher mental functions only through social interactions (Swartz, 2009). Social interactions help people decrease the discrepancy between their chronological age and their problem-solving abilities – for example, choosing between competing and cooperating. In other words, the cultural or institutional context influences the individual's social maturity.

In the 1980s, Howard Gardner suggested the idea that humans have multiple intellectual competencies. Initially, he defined seven human intelligences: logical-mathematical, linguistic, musical, bodily-kinesthetic, intrapersonal, and interpersonal. He later added naturalist and spiritual intelligences (Parkay et al., 2014). Emotional intelligence encompasses intrapersonal and interpersonal intelligences that include our interactions with ourselves as well as our interactions with others, respectively (Gardner, 2017). Gardner's theory of multiple intelligences became a stepping-stone for other researchers.

Mayer et al. (2000) distinguished emotional intelligence from social/verbal intelligence because emotional intelligence includes reasoning about internal emotions in addition to reasoning about emotions in social relationships. Additionally, they claimed emotional intelligence is more focused on emotional aspects of problems associated with personal and social relationships than social/verbal intelligence. Mayer et al. (2004) said that people with higher emotional intelligence may desire occupations that require extensive social interactions. Emotional intelligence is a person's ability to solve problems within social relationships (Mayer et al., 2008). These three researchers contend that emotional intelligence is an ability distinct from other intelligences and should be assessed as such. They warn that some researchers making assessments and claims about emotional intelligence are confusing emotional ability with personality traits. Some researchers questioned whether emotional intelligence can be measured, given its intersection with personality traits (Fineman, 2004; Pfeiffer, 2010). Mayer et al. (2016) recently acknowledged that there is some evidence to show that emotional intelligence may be part of broader personal or social intellect, but they stand by their years of research that it is, at least partly, distinct.

Daniel Goleman (1998) defined five dimensions of emotional intelligence: self-awareness, managing emotions, motivating others, showing empathy, and staying connected (Goleman, 1998, 1999). According to Goleman (1998), true leaders show qualities of the heart in addition to qualities of leadership. Dimensions of emotional intelligence are complementary to rational intelligence. He claimed emotional intelligence is not innate, but instead is a capability which can be developed. Goleman (1999) claimed research has shown emotional intelligence to be superior to cognitive abilities and technical skills. He encourages screening for emotional intelligence as standard practice when hiring people for leadership positions.

Society-at-Large

A body of literature exists that shows the relationship between emotional intelligence and leadership styles. Turk and Wolfe (2018) acknowledged that principals work in high-pressure environments filled with intrapersonal and interpersonal stressors, but principals who initiate, utilize, and sustain resonant leadership show characteristics of emotional intelligence similar to Goleman's five dimensions of emotional intelligence (1998, 1999), as well as resilience in their emotional regulation. Transformational leadership can be enhanced through the development of emotional intelligence (Mathew & Gupta, 2015). Emotional intelligence strengthens the relationship between transformational leadership and organizational commitment when mediated with job autonomy (Jain & Duggal, 2018). Kouzes and Posner (2017) emphasized that leadership is a behavior rather than a personality. Goleman (1998) referred to a leader as someone who can identify a problem and create a solution. Trust, autonomy, lower job stress, and a strong professional culture are positively related to job satisfaction (Erichsen & Reynolds, 2019). Administrators with high emotional intelligence tune in to the mental health of their faculty and staff by showing empathy and staying connected (Goleman, 1998, 1999).

Employees who perceive the psychosocial safety climate of the workplace to be high are more engaged and more durable against stressful job demands (Garrick et al., 2014). Supportive leadership behavior is associated with better workplace attendance by subordinates (Schmid et al., 2017).

One aspect of generational cohorts is the “generational personality” (Maier et al., 2015, p. 388) that the group brings to work environments. Older generations view newer generations as difficult (Galdames & Guihen, 2020), which may perpetuate us-versus-them perceptions (Maier et al., 2015). Research shows that individuals from different generations differ in what they want from their work, what they value about work, how they want to be led, and how they lead others (Ahn & Ettner, 2014; Arsenault, 2004; Maier et al., 2015). Generations also differ in how they spend money and the value they place on relationships (Kupperschmidt, 2000). Twenge et al., 2010). Arsenault (2004) described the generational differences as “a legitimate diversity issue” (p. 137) among organizational leadership. However, there are few empirical studies that include the Millennial Generation for organizations to rely on throughout this transition (Galdames & Guihen, 2020).

Theoretical Background

Social Cognitive Theory (Bandura, 1986, 2000) states that there is a reciprocal relationship between individuals’ personal, behavioral, and environmental factors. Intentionality, forethought, self-reactiveness, and self-reflectiveness allow people to make deliberate decisions, visualize outcomes, plan, and evaluate the outcomes within the interplay of personal, behavioral, and environmental factors (Bandura, 1999, 2006). It is human nature to observe and imitate others and to choose paths that will help oneself find success and avoid failure (Bandura, 1999, 2006). Successful performance leads to higher personal and

collective efficacy, thus improving well-being for those involved and increasing success (Bandura, 1999). Such activity creates social structures with set parameters and provides resources for human functioning (Bandura, 2006). A strong collective efficacy fortifies the group against obstacles and increases motivation to endure toward the shared vision (Bandura, 2006).

Generational Cohort Theory suggests that cohorts of individuals are influenced by the time period in which they grew up (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013). Generational stereotypes do not apply to every individual member of a generation (Lim & Epperly, 2013), and there are individuals who are on the cusp of one generation going into the next (Arsenault, 2004). However, many researchers agree that generational cohorts have been shaped by the political, social, and economic climates in which they grew up (Kupperschmidt, 2000; Lim & Epperly, 2013; Twenge, 2010). Arsenault (2004) contended that generational differences are distinct enough to be considered a diversity issue within society.

Emotional Intelligence Theory (Mayer & Salovey., 1997; Salovey & Mayer, 1990) places four emotional abilities on a continuum of emotional skill: perceiving emotion, using emotion, understanding emotion, and managing emotion. Mayer et al., (2000, 2008) contended that emotional intelligence is an ability that can be measured by an objective assessment. Leaders who achieve top scores in managing emotions can tap into tenets of social emotional theory, including promoting coordination among team members and utilizing their own emotions to bring out the best in others with their charisma, motivation, and support (Salovey et al., 2003). Together, Social Cognitive Theory, Generational Cohort Theory, and Emotional Intelligence Theory provide the foundation for examining how generational differences may be related to principals' emotional intelligence.

Problem Statement

Emotional intelligence positively relates to employee job satisfaction (Wen et al., 2019). It predicts success for both individuals and organizations (Prentice et al., 2020). Jobs that require consistent customer and client care compel employees to utilize emotional understanding and management during interactions with coworkers and the public (Prentice et al., 2020). Wen et al. (2019) suggested that employees in the hospitality industry must practice deep acting in which they suppress negative emotions and stimulate positive emotions to align themselves with organizational requirements. The researchers referred to deep acting as part of employees' "emotional labor" (p. 127). Principals who show their staff respect, care, trust, encouragement, and protection find themselves leading highly motivated staff members who are committed to working as a team and to accomplishing the vision of the school (Lambersky, 2016).

Some leadership characteristics are timeless, like honesty, integrity, and fairness (Ahn & Ettner, 2014). Jung et al., (2020) emphasize that employees benefit from leaders who practice transparency and lead with integrity. Employees and leaders bear the onus of understanding, using, and managing their emotions for optimal individual and organizational outcomes (Prentice et al., 2020) However, generational differences impact the way certain age groups perceive the world (Kupperschmidt, 2000). For example, members of the Millennial Generation place a higher value on leader transparency and integrity than members of Generation X. Subsequently, principals' senses of purpose are connected to their social interactions with teachers and colleagues. Because principals have interpersonal interactions within their school and with the public, and leadership positions are being filled by members of Generation X and Millennials, it is important to explore how generational differences may relate to emotional intelligence of public school leaders. There is limited empirical research about generational differences between

Generation X and the Millennial Generation as leaders (Galdames & Guihen, 2020). The problem is Millennials are beginning to populate leadership positions, so there is a call to see how and if they will differ from leaders from Generation X, starting with a comparison of each group's emotional intelligence capabilities.

Purpose Statement

The purpose of this quantitative study is to discriminate between the emotional intelligence of sitting school leaders in Generation X and the emotional intelligence of school leaders in the Millennial Generation. This study will contribute to the vast body of literature about emotional intelligence and help fill the void of empirical research regarding generational differences in leadership. Generational affiliation of the principals is the criterion variable, and emotional intelligence scores are the predictor variables for a Discriminant Function Analysis (DFA). Generational affiliations include Generation X, or individuals born 1965-1980, and the Millennial Generation, or individuals born 1980-2000 (Hansen & Leuty, 2012; Jena, 2016; Lim & Epperly, 2013). Emotional intelligence is an ability to process emotions and emotional stimuli in a way that guides thinking and behavior (Mayer et al., 2008). The four branches of emotional intelligence that were the predictor variables are perceiving emotions, facilitating thoughts, understanding emotions, and managing emotions as measured by Mayer-Salovey Emotional Intelligence Test, or MSCEIT (Mayer et al., 2002). Perceiving emotions includes identification of emotions in self, others, and the arts (Salovey et al., 2003). Using emotion entails employing feelings for thinking and communication (Salovey et al., 2003). Understanding emotion includes comprehending, synthesizing, and appreciating emotions (Salovey et al., 2003). Managing emotions requires people to regulate emotions of self and others (Salovey et al., 2003).

Eighty six elementary principals in the northeastern United States completed an online emotional intelligence ability test, MSCEIT (Mayer et al., 2002). The study did not include assistant principals. The sample for this study was drawn from a convenience sample in school districts in the northeastern United States from the fall of 2021 to the spring of 2023. The sample was convenient to the researcher because the researcher lived in a northeast state and contact information for the principals was accessible through public websites. The research design was non-experimental, quantitative, and correlational, and used a cross-sectional survey as the method of data collection. A correlational design was appropriate because it was not possible to manipulate any of the variables or naturally occurring groups of participants in the cross-sectional survey (Rovai et al., 2013). A correlational design does not verify cause and effect relationships but does allow researchers to identify statistical associations between variables (Gall et al., 2007; Rovai et al., 2013).

Significance of the Study

Awareness of others' emotions and how to manage them, self-motivation, and empathy characterize both transformational leadership and emotional intelligence (Mathew & Gupta, 2015). Some characteristics of leaders with high emotional intelligence may include promoting a shared vision with subordinates (Bradford & Braaten, 2018), working with subordinates to identify needed change (Jain & Duggal, 2018), and setting a positive tone for the organizational culture (Tai & Abdull Kareem, 2019). The organizational climate is positively correlated with leadership style (Maamari & Majdalani, 2017). Leadership characteristics accepted by followers include interaction, communication, motivational skills, and adaptability. Maamari and Majdalani found that leaders with prominent levels of emotional intelligence create a climate of warmth, support, and stability. They have better communication

and social relationships characterized by higher levels of empathy and norming among team members than leaders without prominent levels of emotional intelligence. They are typically respected by team members, including peers, colleagues, and subordinates (Parrish, 2015). Emotional intelligence is key for creating feelings of trust and cooperation in highly stressful work conditions (Rezvani et al., 2016).

Leaders with elevated levels of emotional intelligence inspire motivation, optimism, self-confidence, insight, responsibility, commitment, and efficiency (Jain & Duggal, 2018; Maamari & Majdalani, 2017; Rajesh, et al., 2019; Rezvani et al., 2016). Open, inspirational, and effective communication alleviates subordinates' job stress (Rajesh et al., 2019). In other words, leaders with elevated levels of emotional intelligence can win their followers over by inspiring positive relationships with and among them.

Baby Boomers have already begun their exodus from workplaces and leadership positions (Twenge et al., 2010). That leaves vacancies for members of Generation X and the Millennial Generation to fill. Galdames and Guihen (2020) described generational research as “cyclical” (p. 13) because young cohorts are often perceived as “difficult” (p. 13), a perception that changes as the generation settles into the work environment. Maier et al., (2015) contended that mixing generations in the workplace has potential to breed creativity, innovation, and positive synergy. However, there is a lack of empirical research about generational differences (Twenge et al., 2010), especially in terms of the growing interest in the topic of Millennials as leaders (Galdames & Guihen, 2020).

Research Questions

RQ1: To what degree do the four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminate

between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial?

Definitions

1. *Competence* - Competence is a natural or learned ability (Sturm et al., 2017).
2. *Discriminant Factor Analysis (DFA)* - DFA builds a predictive model of group membership, based on the best linear combinations of predictor variables that provide the strongest discrimination between two or more groups of participants (Miller, 2016).
2. *Emotional Intelligence* – Emotional intelligence is an ability to process emotions and emotional stimuli in a way that guides thinking and behavior (Mayer et al., 2008).
3. *Generations* – Generations are cohorts of individuals who have been influenced by the same social, economic, and political forces because of when they grew up (Twenge et al., 2010).
4. *Intelligence* - Intelligence is an ability that has specific correlational patterns with itself and other intelligences and develops with experiences over time (Mayer et al., 2000).
5. *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)* - MSCEIT is a 141-item assessment of emotional intelligence ability published by Multi-Health Systems (Mayer et al., 2002).

Summary

The purpose of this study is to use a correlation design to examine the degree to which four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial. Principals' emotional intelligence is measured by an emotional intelligence ability test, MSCEIT (Mayer et al., 2002),

and demographic data including participants' age is included in MSCEIT for simultaneous collection. Research shows that leaders who show positive personal and human qualities influence positive behaviors from subordinates (Lambersky, 2016). The problem is that there is no empirical research that discriminates between the emotional intelligence of school leaders in Generation X and the emotional intelligence of school leaders in the Millennial Generation. Based on Social Cognitive Theory (Bandura, 1986, 2000), Generational Cohort Theory (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013), and Emotional Intelligence Theory (Mayer et al., 2000), the researcher seeks to answer the following question: To what degree do the four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial Generation?

CHAPTER TWO: LITERATURE REVIEW

Overview

The purpose of this study is to use a correlation design to examine the degree to which four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminate between two categories of sitting principals classified by their generational affiliation: (1) Generation X and (2) Millennial. The researcher intends to contribute to the limited amount of research about generational similarities and differences among members of the most recent generations, as well as enhance the depth of literature about emotional intelligence and leadership. The following literature review illustrates the overlap of Social Cognitive Theory, Generational Cohort Theory, and Emotional Intelligence Theory as a framework to study whether generational affiliation may be related to emotional intelligence of school leaders. The related literature that follows the theoretical framework explores intelligence and competence, generations in the workforce, leadership, and school leadership.

Theoretical Framework

This research is built on a foundation of Social Cognitive Theory (Bandura, 1986, 2000), Generational Cohort Theory (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013), and Emotional Intelligence Theory (Mayer & Salovey, 1997; Salovey & Mayer, 1990) as they pertain to educational leaders. Each of these theories involves human interaction and its influence on the sociocultural environment. The current study uses these three theories as a framework to understand how school leaders' emotional intelligence may differ by generational affiliation.

Social Cognitive Theory

Bandura (1986, 2000), author of social cognitive theory, based the theory on a reciprocal interaction between personal, behavioral, and environmental factors. In other words, humans are both producers of their futures and products of their past (Bandura, 1999, 2006). Physical and social circumstances organically happen to individuals, but the human mind provides ideas and opportunities that a person can act on and influence circumstances yet to come (Bandura, 1999). When a person makes an intentional move to function within life's circumstances, the person is exercising *human agency* (Bandura, 2006).

Human agency includes four core properties: intentionality, forethought, self-reactiveness, and self-reflectiveness (Bandura, 1999, 2006). These properties allow people to make deliberate decisions, visualize outcomes, plan, and evaluate the outcomes within the interplay of personal, behavioral, and environmental factors. Three modes of agency characterize social cognitive theory: individual, proxy, and collective (Bandura, 2006). Individual agency applies to decisions and actions made by an individual. Proxy agency is acting on the behalf of someone else or surrendering control to someone else. Collective agency is a collaborative effort toward a decision or behavior (Bandura, 1999, 2006). Therefore, being cognizant of actions, as well as acting on them within the environment, illustrates humans functioning within reciprocal social systems (Bandura, 2006).

Human learning occurs through observation of behaviors and consequences (Bandura, 1999). Observation provides motivation for the observer (Bandura, 1999). A person may decide to achieve success or avoid a failure based on some else's experience (Bandura, 1999; Schunk & DiBenedetto, 2020). Cognitive models form with each experience within the sociocultural environment and serve as reference guides to regulate decisions and actions

(Bandura, 1999). When there is little chance of success, people are not motivated to act or persevere (Bandura, 1999). Thus, human agency allows people to have some power over making things happen and shaping a better future (Bandura, 1999, 2006).

Collective agency allows people to work together to achieve goals (Bandura, 2006). Supportive relationships enhance humans' abilities to cope with disappointments and problems and persevere thus increasing success and improving well-being for those involved (Bandura, 1999). Such activity creates social structures with set parameters and provides resources for human functioning (Bandura, 2006). A strong collective efficacy fortifies the group against obstacles and increases motivation to endure toward the shared vision (Bandura, 2006). Occupational choices are an integral part of personal agency (Bandura, 1999). Since humans are influenced by their past and can have influence on their futures (Bandura, 2000), choosing an occupation may be a choice about personal identity (Bandura, 1999).

Social cognitive theory lays a foundation for research about educational leadership. Leadership experts, Kouzes and Posner (2017), presented five practices of extraordinary leaders who achieve extraordinary success: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. Although not explicit in Kouzes and Posner's text, each of these principles of leadership behavior is connected to tenets of social cognitive theory. A leader models expected values and expectations that will help construct the social environment (Bandura, 2000). By inspiring a shared vision, leaders facilitate the formation of collective agency working toward the same goal (Bandura, 1999, 2000, 2006). When leaders challenge a process, they are building collective efficacy in the face of adversity (Bandura, 1999, 2000, 2006). Leaders who enable others to act are allowing others within the group to exercise personal agency for the good of the collective (Bandura, 1999). Finally, leaders who encourage

the heart are developing social relationships that help individuals in the collective be better equipped to handle struggles and obstacles (Bandura, 1999). Thus, Kouzes and Posner's ideas of extraordinary leadership behaviors are necessarily connected to social cognitive theory.

Generational Cohort Theory

Generational Cohort Theory suggests that cohorts of individuals are influenced by the period in which they grew up (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013). Generational stereotypes do not apply to every individual member of a generation (Lim & Epperly, 2013), and there are individuals who are on the cusp of one generation going into the next (Arsenault, 2004). However, many researchers agree that generational cohorts have been shaped by the political, social, and economic climates in which they grew up (Kupperschmidt, 2000; Lim & Epperly, 2013; Twenge, 2010). Reciprocity with the environment is also part of Social Cognitive Theory (Bandura, 1986, 2000). Individuals are particularly influenced during childhood, adolescent, and early adult years (Zachara, 2020). Generations change as society changes, so each generation develops its own value system (Twenge, 2010). A generation's belief systems are unique and stable over time (Holden & Raffo, 2014). Maier et al. (2015) called this a "generational personality" (p. 388) that affects what individuals want and what they value in their lives. Kupperschmidt (2000) called it "generational characteristics" (p. 65). New generations bring new ways of looking at situations and new ways to solve problems, even if they are problems that have perpetuated through other generations (Anderson et al., 2017).

Generational research suggests that when members of a new generation are entering the mainstream, they are perceived as difficult; however, this perception tones down over time as the new generation settles into the workplace (Galdames & Guihen, 2020). Arsenault (2004) contended that generational differences are distinct enough to be considered a diversity issue

within society. Maier et al. (2015) said that workplaces can stimulate creativity by capitalizing on generational differences among individuals instead of creating a work environment in which the generations are competing. Kupperschmidt (2000) suggested taking a “generational perspective” (p.65) in which each generation acknowledges the strengths of individuals from other generations.

Many researchers understand the generation gap to describe how cohorts of individuals are influenced by political, economic, and social conditions of an era (Jena, 2016; Lim & Epperly, 2013; Zachara, 2020). The contemporary work force is comprised of the Baby Boomers, those born 1946-1964; Generation X, those born 1965-1980; and Millennials, those born 1981-2000 (Hansen & Leuty, 2012; Jena, 2016; Lim & Epperly, 2013). The researcher will use the dates above for the purposes of this research. However, there is disagreement among researchers regarding the years of each generational span (Galdames & Guihen, 2020). Kupperschmidt (2000) identified the Baby Boomer Generation as people born beginning as early as 1940 and ending in 1960. Zachara (2020) and Bottomley and Burgess (2018) agreed with a Baby Boomer end date of 1960, thus starting Generation X in 1961. Holden and Raffo (2014) also gave a beginning date of 1961 for Generation X. Some researchers agreed that Generation X ends with individuals born in 1980 with the Millennial Generation beginning in 1981 (Holden & Raffo, 2014; Kupperschmidt, 2000). However, some took Generation X into 1981 with the Millennial generation beginning in 1982 (Bottomley & Burgess, 2018; Twenge et al., 2010; Zachara, 2020). Researchers indicated that the Millennial Generation ends with individuals born in 1999 (Twenge et al., 2010; Zachara, 2020), 2000 (Holden & Raffo, 2014), or 2004 (Bottomley & Burgess, 2018). The Millennial Generation has the greatest population of any generation in history (Zachara, 2020).

Emotional Intelligence Theory

Emotional intelligence is the ability to perceive, express, understand, and manage emotions in a way that benefits self and others (Salovey et al., 2003). Emotional intelligence encompasses intrapersonal and interpersonal intelligences that include our interactions with ourselves as well as our interactions with others, respectively (Gardner, 2017). Reciprocity becomes an important aspect of social interactions (Bandura, 1986, 2000). Emotional Intelligence Theory (Mayer & Salovey, 1997; Salovey & Mayer, 1990) places four emotional abilities on a continuum of emotional skill. The four levels in ascending order are perceiving emotion, using emotion, understanding emotion, and managing emotion. The top skills are dependent on the lower levels (Brackett & Mayer, 2003).

Perceiving emotions includes identification of emotions in self, others, and the arts (Salovey et al., 2003). Lindquist et al. (2014) claimed that perception of basic emotions like anger, fear, disgust, sadness, and happiness, is innate and develops with age. Additionally, they acknowledged that people who lack skills to perceive emotions may make poor social judgements in personal and professional situations. Social Cognitive Theory (Bandura, 1986, 2000) explains social judgments as a person's desire to achieve success and avoid failure. Lindquist et al. (2014) completed a study of patients with deficits in semantic processing abilities. Their data suggested that the important components of normal emotional perception are "perception of affect" and "categorization that is supported by emotion concept knowledge" (p. 385). In other words, people can perceive others' emotions by judging facial expressions by their own concept knowledge of emotions. Van Kleef's (2009) research suggested that once people perceive others' emotions, they make an inference that determines how they will react.

Therefore, people's observations of other's emotions may prompt people's behaviors.

Emotional perception opens the door to the goals and interests of others (Côté et al., 2010).

Using emotion entails employing feelings for thinking and communication (Salovey et al., 2003). Brackett et al., (2004) said, "Emotional intelligence involves the capacity to carry out reasoning in regard to emotions, and the capacity of emotions to enhance reasoning" (p. 1388). The other three branches of emotional intelligence require reasoning about emotions, but using emotions is the sole branch that requires emotions to strengthen reasoning (Mayer et al., 2001). It may include weighing emotions against one another or against thoughts about the emotions to focus mental processes on some aspect of a problem (Emmerling & Cherniss, 2003). When an individual uses emotion, the individual must adapt his or her thinking to use the emotional information cognitively. High ability to use emotions predicts leadership emergence within small groups (Côté et al., 2010).

Understanding emotion includes comprehending, synthesizing, and appreciating emotions (Salovey et al., 2003). Individuals with the ability to understand emotions must comprehend emotions within relationships, be able to transition between emotions, and interpret linguistic information about emotions (Mayer et al., 2001). Mayer et al., (2001) contended that understanding emotions requires more cognitive and abstract processing than the other three branches of emotional intelligence. In fact, this branch has the strongest correlation with intelligence quotients when compared to the other branches. Yip and Martin (2006) determined that prevalence of sadness, distress, and grumpiness, are negatively correlated with emotional perception and understanding. Understanding emotions and the consequences of emotions aids in decision-making (Côté et al., 2010).

Managing emotions requires people to regulate emotions of self and others (Salovey et al., 2003). Self-enhancing humor is positively correlated with emotional management (Yip & Martin, 2006). Self-enhancing humor demonstrates an ability to regulate emotions in challenging situations. In contrast, people who lack these skills may resort to using humor in inappropriate and disparaging ways. Yip and Martin also found that people who can manage their emotions effectively feel more cheerfulness and less negativity. Additionally, they determined that emotional intelligence was positively related to initiating relationships, providing emotional support, and conflict management. Higher levels of ability to perceive and manage their emotions may be related to promoting a shared vision with peers, colleagues, subordinates (Bradford & Braaten, 2018); working with subordinates to identify changes (Jain & Duggal, 2018); and setting a positive tone to improve the organizational culture (Tai & Abdull Kareem, 2019). One facet of social cognitive theory is making observations and choices to gain success and avoid failure (Bandura, 1999; Schunk & DiBenedetto, 2020). Emotionally intelligent individuals learn management strategies based on experiences, consequences, and observations (Côté et al., 2010). Managing emotions, the highest branch on the emotional intelligence continuum, links emotions in people's cognitive system and those in their personality system (Mayer et al., 2001).

Mayer et al. (2000, 2008) argued that emotional intelligence qualifies as an intelligence that is separate from personality traits. They said people can have intelligence about emotions even if they do not present as sociable or emotional people (Mayer et al., 2008). Emotional intelligence is an ability that can be assessed with right or wrong answers, relates to other intelligences despite its distinction, and grows and develops as a person ages (Mayer et al., 2000). In contrast, emotional intelligence as personality traits is best assessed through self-report

questionnaires (Lopes et al., 2003). In terms of performance, personality tests measure what is typical, but ability tests measure what is optimal (Lopes et al., 2003). Measuring emotional intelligence as an ability allows researchers to use it empirically to predict socially relevant outcomes (Mayer et al., 2003, 2008).

Theoretical Overlap

The four tenets of emotional intelligence theory provide ability measures to aspects of social cognitive theory. Social cognitive theory emphasizes collective beliefs, interaction, coordination, and cooperation as the building blocks of perceived efficacy (Bandura, 1999, 2006). Similarly, at the top of the managing emotion branch of emotional intelligence, people can utilize strategies to improve their own feelings as well as the feelings of others. They will seem motivating, charismatic, and able to provide optimal social support to others (Salovey et al., 2003). Lopes et al. (2003) determined that emotional intelligence is significantly correlated with many indicators of social interaction. Generational Cohort Theory indicates that members of generations are shaped by social, political, and economical forces of their era (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013). The purpose of this quantitative correlational study is to determine if there are significant relationships between emotional intelligence abilities of school leaders from Generation X and emotional intelligence abilities of school leaders from the Millennial Generation since each generation has been shaped by different forces.

Related Literature

Intelligence and Competence

People will attend to models (leaders) they believe are competent (Schunk & DiBenedetto, 2020). Emotional information includes human relationships with other people and

their immediate environment, and cognitive information that is derived from concepts beyond our immediate environment (Mayer et al., 2001). Emotional intelligence is positively correlated with cognitive intelligence (Côté et al., 2010). Baczyńska & Thornton (2017) labeled general mental abilities as analytical intelligence, everyday problem solving as practical intelligence, and influence over others as social intelligence. They correlated analytical intelligence with five managerial performance dimensions: leadership, initiative, goal orientation, change orientation, and employee development. However, there was some indication that inductive and deductive reasoning, or analytical intelligence, required for the position of the top managers they studied may be specific to managerial roles when compared to other forms of intelligence. They found no link between emotional intelligence and the performance dimensions of the top managers studied, despite their responsibility to strategize, problem solve, motivate employees, and monitor the work environment. Thus, according to their research, analytical, or general intelligence, is most essential for effective managerial performance.

Sturm et al., (2017) suggested that an entanglement of competence and character leads to extraordinary leadership performance. They define competence as a natural or learned ability and character as behaviors influenced by virtues and experiences. Adding highly developed character to leadership competence enhances leadership qualities with virtuous, moral, quality judgment and decision-making.

Mayer et al., (2000) contended that for something to be categorized as an intelligence it must be an ability, have specific correlational patterns with itself and other intelligences, and develop with experiences over time. Dimensions of emotional intelligence are complementary to rational intelligence (Goleman, 1998). Emotional intelligence is not innate, but instead is a capability which can be developed. Goleman (1999) claimed research has shown emotional

intelligence to be superior to cognitive abilities and technical skills. He also said that general intelligence encompasses many mental abilities. Edbor and Singh (2016) suggested emotional intelligence may be more important than intellectual and cognitive abilities for successful leadership because of the need for leaders to show empathy, flexibility, and influence with their work force. When emotional intelligence increases, academic performance and abilities to communicate motivating messages also increase. However, declines in emotional intelligence indicate a rise in problem behaviors (Mayer et al., 2004). Afzal et al. (2018) found that project success is positively related to emotional intelligence.

There are two schools of thought regarding emotional intelligence measurement: ability model and mixed model (Brackett et al., 2006). Emotional intelligence ability tests measure mental skills using a performance test (Mayer et al., 2000). Whereas, mixed model intelligence tests measure perceived emotional competencies and personality traits using self-report measures (Brackett et al., 2006). Mixed models are associated with well-being, neuroticism, and depression (Brackett et al., 2006) rather than mental abilities. Therefore, they indicate different information from emotional intelligence ability tests that are more like a comprehensive performance test (Mayer et al., 2002). Fineman (2004) and Pfeiffer (2010) caution that personality traits may interfere with the measurement of emotional intelligence as an ability.

One mixed-model measure of emotional intelligence is Bar-on Emotional Quotient Inventory (1997). The instrument measures a composite intrapersonal score in subscales of emotional self-awareness, assertiveness, self-regard, self-actualization, and independence. It measures a composite interpersonal score with subscales of empathy, interpersonal relationship, social responsibility, adaptation, and problem solving. Bar-on also provides a reality testing score that does not have subscales. A flexibility composite score is determined with subscales for

stress management and stress tolerance. Finally, an impulse control composite is determined by subscales in general mood, happiness, and optimism (Dawda & Hart, 2000). To complete this assessment of emotional intelligence, respondents complete 133 items in which they rate themselves on a five-point scale. Another mixed-model instrument is the Emotional Intelligence Scale (Schutte et al., 1998). The 33-item self-report scale measures appraisal and expression of emotion in self-and others, regulation of emotion in the self and others, and utilization of emotions in solving problems. The researchers contend that this instrument is valid for individuals seeking self-appraisal to understand themselves and set goals for improvement, to understand problems related to emotional problems such as impulsivity, or to ready themselves for careers in which emotional intelligence is important. They caution that it is not appropriate for screening potential employees.

Mayer et al. (2000) argued emotional intelligence is a human performance best measured as an ability. Emotional intelligence is part of a broad class of intelligences called “hot intelligences” which require reasoning with information that “may chill our hearts or make our blood boil” (Mayer et al., 2016, p. 290). To test emotional intelligence, the test, especially the problem-solving portion, must draw on relevant mental abilities to be valid (Mayer et al., 2016). Such validity is important for using emotional intelligence to empirically predict socially relevant outcomes (Mayer et al., 2008). Mayer et al. (2004) listed the following traits for a person with high emotional intelligence: perceives, uses, understands, and manages emotions better than others; solves emotional problems with less effort than others; has higher verbal, social, and other intelligences; is more open and agreeable; avoids negative behaviors, holds sentimental attachments; has more positive social interactions; and shows aptitude for describing

goals, aims, and missions. Emotional intelligence has a positive relationship with effective leadership (Edelman & van Knippenberg, 2018).

Wojtalik et al. (2013) examined 51 patients in the initial stages of schizophrenia using MSCEIT (Mayer Salovey Caruso Emotional Intelligence Test; Mayer et al., 2002). In addition to emotional intelligence, the researchers assessed brain morphology. Their results suggested emotional intelligence is related to brain matter density in the brain. Low overall intelligence scores were associated with lowered gray matter density in the left para hippocampal gyrus. Lower density in this same region was associated with three of the MSCEIT subscales: facilitating emotion, understanding emotion, and managing emotions. Gray matter density in the right posterior cingulate was associated with facilitating emotions and managing emotions. The perceiving emotions subscale was not correlated with brain morphology of gray matter. The results of this study suggested that emotional intelligence may be associated with brain structure, at least in patients with schizophrenia. More research is needed to determine if this is true of a larger sample size and if it can be generalized to a typical population.

Generations in the Workforce

Empirical studies about generational differences are scant in contemporary literature (Galdames & Guihen, 2020; Twenge et al., 2010). Ahn and Etner (2014) used a thematic analysis approach and a mixed-method research framework to explore leadership values that have stood for centuries. They coded Virgil's *The Aeneid*, an ancient tale that follows Aeneas on a difficult journey after the Trojan War, to note foundational human values: integrity, good judgment, leading by example, decision-making, trust, justice/fairness, humility, and sense of urgency. They interviewed 13 executive leaders using open-ended questions, and they surveyed 137 Masters of Business Administration (MBA) students about how they would rank the eight

qualities found in *The Aeneid*. Results indicated that experienced executive and early-career students all value good judgment, leading by example, decision-making, fairness/justice, humility, and sense of urgency to the same importance in leadership. The researchers concluded that though generations vary in their thoughts, beliefs, and values, there are certain values that endure as fundamental human values.

Generational differences indicate that older and younger people bring different beliefs, values, attitudes, and preferences to the workplace as demonstrated through mind-set (Arsenault, 2004). Generational differences in mind-set may become evident to how individuals from different generations lead and how they want to be led (Anderson et al., 2017; Jena, 2016; Kupperschmidt, 2000). People from different generations may differ in how they want to spend their money, how much time they are willing to put in at their jobs versus time with family, how they feel about authority, and how jobs should be structured in terms of working conditions and benefits (Kupperschmidt, 2000; Twenge et al., 2010). Generational gaps in the workplace have potential to lead to misunderstandings about preferences and priorities at work (Jena, 2016).

Twenge et al. (2010) completed an empirical study to determine generational differences in work values. They gathered data from a survey that has been given to high school seniors since 1976. They used survey data from 1976, 1991, and 2006 to analyze differences in work values from Baby Boomers, Generation X, and Millennials respectively, but at the same age. Results indicated that with each generation, the emphasis on the importance of leisure time increased. Generation X valued extrinsic rewards more than Baby Boomers and Millennials, but Millennials valued them more than Baby Boomers. Each generation showed a decrease in valuing intrinsic, altruistic, and social rewards from work. Extrinsic rewards include income,

promotions, and anything tangible that comes from the workplace. Intrinsic rewards include the intangible satisfaction people get from working. Altruistic rewards include feeling good about how one's work helps improve society at large, and social rewards are the feelings of belonging to a group. The shifts in what members of each generation value influence how employees and employers perceive and perform at their jobs (Twenge et al., 2010).

Generation X

By 2030, Baby Boomer's youngest members will be of retirement age in the United States. According to Twenge et al. (2010), Baby Boomers made up 75 million workers in 2010. They have been and will need to be replaced by members of younger generations. Generation X is less populous than the Baby Boomers and Millennials (Lim & Epperly, 2013). Members of Generation X are generalized to be latch-key kids who came home from school to an empty house because both parents were working (Jena, 2016; Kupperschmidt, 2000). They carry the trauma of high rates of parental divorce, and in some cases, fathers were absent from their lives (Kupperschmidt, 2000; Lim & Epperly, 2013; Twenge et al., 2010). Families struggled as they watched the national debt soar (Kupperschmidt, 2000; Twenge et al., 2010). Many children from this generation watched their parents work hard just to be fired from their jobs due to the economic recession of the 1980s (Gentry et al., 2011; Jena, 2016; Twenge et al., 2010). As children and adolescents, they witnessed the AIDs epidemic, the savings and loans crisis, Black Monday in 1987, the Iran-Contra Affair, and the 1989 fall of the Berlin Wall and communism in Germany (Gentry et al., 2011; Twenge et al., 2010). Overall, they grew up in socially and financially turbulent times (Jena, 2016), which may account for their skepticism and cynicism for authority figures (Gentry et al., 2011; Jena, 2016; Lim & Epperly, 2013). Currently,

they are aware of the uncertainty of working in a society with a diminishing social security system and rapid inflation of the cost of living (Twenge et al., 2010).

Members of Generation X have waited patiently to take leadership positions from retiring Baby Boomers (Bottomley & Burgess, 2018). They are often well-educated, and they value having multiple certifications and qualifications for employment (Jena, 2016; Lim & Epperly, 2013). Subsequently, they seek professional development for their knowledge and skills (Lim & Epperly, 2013). As workers, they value diversity, technology, and leisure (Holden & Raffo, 2014; Kupperschmidt, 2000; Lim & Epperly, 2013). Additionally, they are independent thinkers who value collaboration and relationships in the workplace (Jena, 2016; Kupperschmidt, 2000; Lim & Epperly, 2013). Generation X has been described as nomadic and reactive because they are not afraid to leave a job for better relationships, outcomes, and skills (Bottomley & Burgess, 2018; Jena, 2016; Kupperschmidt, 2000). They prefer to be coached rather than bossed, and they want to be valued and rewarded for a job well-done (Kupperschmidt, 2000). Due to the difficulties of the economy during their childhood, Generation X employees' question everything (Lim & Epperly, 2013), do not take the future for granted (Kupperschmidt, 2000), and adapt to change (Jena, 2016). They expect to be able to establish a balance between work and leisure (Jena, 2016; Kupperschmidt, 2000) because they are family-oriented (Lim & Epperly, 2013). Other words that describe Generation X are self-directed, balanced, relaxed (Lim & Epperly, 2013), realistic, practical in problem solving (Kupperschmidt, 2000), television-driven, risk taking, entrepreneurial, savvy (Kupperschmidt, 2000), multitasking, and resourceful (Jena, 2016; Kupperschmidt, 2000). They value technology, innovation (Jena, 2016), diversity, career security, competent leaders and coworkers (Kupperschmidt, 2000), and a comfortable work environment (Lim & Epperly, 2013).

Millennial Generation

The Millennial Generation includes individuals born 1981-2000 (Hansen & Leuty, 2012; Jena, 2016; Lim & Epperly, 2013). They are called by many names, including GenMe or Generation Me (Twenge et al., 2010; Zachara, 2020), Generation Y, Echo Boomers, Next Generation (Lim & Epperly, 2013), the Selfie Generation (Anderson et al., 2017), and Trophy Kids (Gentry et al., 2011; Zachara, 2020). During their childhood and adolescent years, this generation experienced the terrorist attacks on the United States on September 11, 2001, the global War on Terror, school shootings, widespread technology, the Indian Ocean Tsunami of 2004, and Hurricane Katrina in 2005 (Lim & Epperly, 2013). Other influences on their development include globalization, rapid advances in technology, and increasing cultural diversity (Zachara, 2020). Like Generation X, they have grown up in a society of high divorce rates and corporate layoffs (Gentry et al., 2011).

The Millennial Generation is anxiously awaiting the vacuum that will result when the Baby Boomers move out of the workforce into retirement (Bottomley & Burgess, 2018). They seek to take the unoccupied positions as quickly as possible without regard to traditional rites of passage that are valued by Baby Boomers and Generation X (Gentry et al., 2011). Hernandez (2018) predicted that Millennials will make up most of the workforce as early as 2025. When Millennials enter an organization, they immediately want to be perceived as valued contributors to workplace decisions (Lim & Epperly, 2013). They have been said to “want it all” and “want it now” (Ng et al., 2010, p. 282) in terms of pay, benefits, promotions, and work responsibilities. For these reasons, Millennials have been labeled entitled, lazy, and self-absorbed (Bottomley & Burgess, 2018). In contrast to these labels, they value and seek professional growth that leads to advancement (Ng et al., 2010).

The Millennial Generation grew up in the digital age (Gentry et al., 2011), so they are accustomed to instant access to information (Twenge et al., 2010). They are adept with modern communications and media (Gentry et al., 2011). Immediate access to information has allowed this generation to have front-row seats to turmoil and challenges around the world (Zachara, 2020). Exposure to the world's instability may be why members of this generation seek social and economic justice, as well as embrace concepts such as "You only live once" (Zachara, 2020, p. 246). The digital age has provided Millennials opportunities to seek answers and receive broad and deep responses through search engines (Hernandez et al., 2018). They are the most educated generation in history, and they have potential to benefit from the growing global economy (Zachara, 2020).

As employees, Millennials value work-life balance and are likely to resist investing more effort and time into work than they desire (Anderson et al., 2017). Twenge et al. (2010) found that Millennials value leisure time more than Baby Boomers and Generation X. They perceive time with families and other personal endeavors as more important than big salaries and promotions (Lim & Epperly, 2013; Twenge et al., 2010). However, that does not mean they do not expect to receive good pay and benefits. Millennials have a reputation of feeling entitled to move up the ranks of organizations quickly without necessarily paying their dues (Ng et al., 2010). In some ways these beliefs clash with the traditional nature of advancement according to previous generations (Zachara, 2020). There is a dissonance between wanting more and working less (Twenge et al., 2010). Twenge and Kasser (2013) found that individuals' material desires became more valued than work ethic as early as the 1980s.

Despite their materialistic nature, Millennials place high value on the humanity of work (Ng et al., 2010). In other words, they want to work with and for people whose values

are like their own. Millennial employees desire to work collaboratively on assignments that are meaningful (Gentry et al., 2011). They want leaders who are ambitious and determined (Holden & Raffo, 2014) and who will challenge the status quo to create change (Arsenault, 2004). They want their leaders to provide feedback and personal attention (Galdames & Guihen, 2020; Lim & Epperly, 2013; Maier et al., 2015). They perceive they are receiving recognition and respect when leaders give them external rewards such as promotions and raises (Anderson et al., 2017; Maier et al., 2015). Rapid promotions and salary increases are a top priority for this generation (Ng et al., 2010). Their interest in the job also depends on cultural diversity in the workplace and purposeful assignments (Galdames & Guihen, 2020; Ng et al., 2010). However, due to the individualistic nature of Millennials, their ideas of a shared vision may be different from those of the employer and may lead to employee disinterest and apathy toward the job (Anderson et al., 2017). Employers may be able to combat this phenomenon by empowering the employees to take part in decision-making processes (Maier et al., 2015).

The Millennial Generation is occasionally referred to as the Trophy Generation (Jena, 2016). When kids in this generation competed in an athletic or academic competition, everyone who participated was rewarded with a trophy or ribbon (Gentry et al., 2011; Jena, 2016). Emphasis shifted away from winning and toward simply showing up. They were praised for simply having hope (Jena, 2016). Helicopter parents attended the competitive events where the kids participated. These parents watched their kids' every move and intervened on their child's behalf whenever a problem came up. Zachara (2020) said helicopter parenting may have led this generation to have increased anxiety, depression, feelings of vulnerability, and traits of narcissism. Other words that describe this generation include confident, high achieving, practical, ecofriendly (Lim & Epperly, 2013), creative (Anderson et al., 2017; Lim & Epperly,

2013), inclusive (Anderson et al., 2017), independent, self-confident, self-expressive, and adaptive to technology (Maier et al., 2015). There is an increasing interest in observing and studying this cohort, but little empirical research about them (Galdames & Guihen, 2020).

Generation X and Millennials in the Work Force

As research has shown, Generation X and the Millennial Generation have distinct dispositions, attitudes, values, and motivations (Anderson et al., 2017). However, both generations value leaders who have ambition, determination, and most importantly, honesty. They also value competence, effectiveness, and ability (Arsenault, 2004). Both generations want personal attention and feedback from their leaders (Anderson et al., 2017; Lim & Epperly, 2013). Additionally, the generations are adept at innovative technologies and working with a sense of purpose (Lim & Epperly, 2013). Both are highly educated and eager to learn more, but they value having time to maintain and invest in their personal lives (Lim & Epperly, 2013). Both generations show a desire for extrinsic rewards regarding their jobs (Twenge et al., 2010). Finally, both cohorts present strong senses of loyalty and commitment to their organizations (Lim & Epperly, 2013).

Gentry et al. (2011) investigated leadership practices that were important to managers from different generations, if managers demonstrated those important skills, and the differences between perceived importance and skill. They surveyed 3,317 Baby Boomers, 3,303 Generation X members, and 429 Millennials who were managers participating in professional development for leadership. They were asked to choose eight leadership practices that they thought were most important from a list of 16 leadership practices. The managers' bosses were asked to rate the managers on their skill for each leadership practice.

Managers from all generations selected Leading Employees and Resourcefulness most often from the list. Leading employees includes “Broadening direct reports; delegating to direct reports; being patient and fair; setting clear performance expectations” (Gentry et al., 2011, p. 43). Resourcefulness includes “Being a flexible problem solver; understanding and working effectively with higher management; being a strategic thinker” (p. 43). Results indicated that the three generations were similar, rather than vastly different, about which leadership practices make successful leaders. When the managers were assessed by their bosses for the skills they display, Baby Boomers and members of Generation X had the highest ratings in Differences Matter, or “respecting varying backgrounds and perspectives” (p. 43). Millennials scored highest in Being a Quick Study, or “Quickly mastering new technical knowledge and skills, learning the business quickly” (p. 43). All three generational cohorts scored lowest in Confronting Problem Employees, or “moving quickly; not waffling; basing decisions on performance” (p. 43). However, effect sizes were small, so the researchers concluded that the generations are more alike than different in terms of their management skill sets. They recommended that organizations spend less time trying to tailor training to the generations and more time building essential leadership skills (Gentry et al., 2011).

Although both Generation X and Millennials value collaboration in the workplace, individuals from Generation X also appreciate autonomy when it comes to making decisions (Lim & Epperly, 2013). Generation X appreciates the social relationships that are formed at the workplace, but Millennials do not find the workplace socially rewarding (Twenge et al., 2010). The researchers inferred that Millennials are not interested in personal relationships at work because they have access to social relationships through social media and other technologies. Twenge and Kasser (2013) indicated that there is an increasing generational gap in terms of

expectations and reality. According to their research, Generation X believes in a linear climb through the ranks of an organization: a climb in which individuals work their way to the top, gradually increasing their salary based on their merit as employees. However, the Millennial generation has a discrepant idea that they are able to leap rapidly up the ranks of an organization to positions of status and high pay right away. This may explain why they have picked up a reputation for being entitled, lazy, and self-absorbed (Bottomley & Burgess, 2018). There is scant research about generational differences among individuals in leadership positions.

Leadership

Emotional intelligence is significantly and positively related to the emergence of leaders within small groups (Côté et al., 2010), implying that emotionally intelligent people naturally exert influence over others. Leaders' emotional intelligence is positively related to subordinates' job satisfaction (Miao et al., 2016; Wen et al., 2019). It predicts success for both individuals and organizations (Prentice et al., 2020). Parrish (2015) identified the three most significant emotional traits for educational leaders: empathy, ability to inspire and guide others, and ability to responsibly manage themselves. Jung et al., (2020) emphasized that employees benefit from leaders who practice transparency and lead with integrity. Kouzes and Posner (2017) explained that showing empathy is a component of fostering collaboration within an organization. Specifically, they contended that showing empathy, through active listening and consideration of alternate viewpoints, will build trust and help subordinates become open to the leader's influence. Leaders who are in tune with their subordinates will be more aware of professional development opportunities that are helpful and appropriate (Rowold & Laukamp, 2009). Parrish (2015) determined that strong emotional intelligence fostered respect from colleagues and subordinates. A mixed-methods study by Stewart-Banks et al. (2015) revealed that

communication, relationships, open-mindedness, approachability, enjoyment of education, and being knowledgeable are key characteristics of principals with committed staff members.

Therefore, educational leaders with strong emotional intelligence have traits that may inspire collective agency and efficacy.

Transformational Leadership

Literature suggests that transformational leadership is related to emotional intelligence (Mathew & Gupta, 2015). Mathew and Gupta created a conceptual framework that connects emotional intelligence and transitional leadership because they are both based on relationships; both require an ability to manage emotions of self and others; and both require empathy, charisma, influence, intellectual stimulation, problem solving, and trust. Using correlational analysis, they proved a relationship between transitional leadership and emotional intelligence. Nielsen and Daniels (2016) identified four dimensions to transformational leadership: charisma, inspirational motivation, intellectual stimulation, and individualized considerations. Each of these dimensions seems to engage aspects of the fourth level of emotional intelligence theory, managing emotions (Salovey et al., 2003). Managing emotions includes assessing and modifying feelings and altering them as needed for given situations (Salovey et al., 2003). Mathew and Gupta (2015) asserted that awareness of others' emotions, ability to manage them, and being self-motivated and empathetic are parts of transformational leadership style because the style is relationship centered. Other behaviors of the transformational leader include cooperation, team building/collective identity (Elshout et al., 2013; Maamari & Majdalani, 2017), open communication (Afzal et al., 2018), motivation of followers (Jain & Duggal, 2018), and the show of consideration for others (Elshout et al., 2013).

Transformational leadership influences organizational commitment of subordinates (Jain & Duggal, 2018), and it is a contributing factor to the work performance of school employees (Stewart-Banks et al., 2015). Jiménez (2018) asserted that transformational leaders with the ability to adapt emotions, thoughts, and behavior are most effective in managing organizational change. Job autonomy, or degree of independence on the job, and emotional intelligence interact to have a positive effect on organizational commitment (Jain & Duggal, 2018). Additionally, high emotional intelligence can strengthen the relationship between transitional leadership and organizational commitment (Jain & Duggal, 2018). Transformational leaders may inspire followers to do more than is expected (Rajesh et al., 2019). This suggests that the leaders are appealing to individual efficacy to inspire a desire to do more. Followers may feel less stressed and more self-confident because of transformational leaders. Transformational leadership is correlated with project success (Afzal et al., 2018). In accordance with social cognitive theory, people decide to act in certain ways based on whether the action will result in success (Bandura, 1999). Transformational leadership shows some congruence to aspects of social cognitive theory and emotional intelligence theory.

Authentic Leadership

Authentic leadership is characterized by integrity and authenticity (Rego et al., 2016) and is strongly related to transformational leadership (Duncan et al., 2017). Authentic leaders are role models who prioritize the needs of followers and the organization. One key area of focus for authentic leaders is maintaining a positive ethical climate (Rego et al., 2016). Rego et al. (2016) completed a correlational study and determined that authentic leadership has a positive influence on employees' organizational commitment, psychological capital, and three of the four dimensions of positive psychological capital: self-efficacy, hope, and optimism. The fourth

dimension, resilience, is not related to authentic leadership. However, self-efficacy, hope, resilience, and optimism all have a positive influence on organizational commitment. Authentic leaders understand how to manage their own values, beliefs, and strengths, and they know how to influence followers to do the same (Walumbwa et al., 2008). Walumbwa et al. suggested that leaders who understand their own strengths and weaknesses exhibit stability and comfort in social situations. They can be transparent in their relationships, and others will trust them in their leadership role. Followers can count on authentic leaders to stand strong on their personal morals, values, and beliefs against pressures from organizations and society (Walumbwa et al., 2008). Additionally, they place followers' needs above their own. In congruence with social cognitive theory (Bandura, 1999, 2006), the integrity of an authentic leader has a positive effect on followers' job satisfaction and commitment (Walumbwa et al, 2008).

School Leadership

Perryman and Calvert (2020) explored why people wanted to become teachers. The three most popular answers were desire to make a difference, desire to work with young people, and love of a subject area. When asked about the most rewarding aspects of teaching, the answers included working with children, watching students learn new material and loving what they are learning, and helping students achieve. Perryman and Calvert's findings are altruistic in nature. Similarly, Tsang and Liu (2016) completed a study in which participants reported teaching to be a meaningful occupation. Teachers participating in the study indicated that they prefer work that directly impacts students to work that is non-instructional. Similarly, Cherkowski et al. (2020) found that school leaders are looking for purpose, passion, play, and presence in their everyday interactions with teachers and colleagues in order to maintain a sense of well-being.

Lambersky (2016) found that teachers reported that they long for encouragement from their school leaders. However, they reported demoralization on account of having their integrity called into question, principals having small groups of favored teachers, principals not defending teachers in front of parents or other stakeholders, principals unable to find time to be visible to staff and students, and principals seeming unaware of teachers' arduous work. Consequences of this demoralization included teachers losing their desire to come to work or, resenting their students. They also reported lowered commitment and an atmosphere of hostility (Lambersky, 2016). None of these are conducive to a synergistic social system of collective agency (Bandura, 2000).

Leadership experts Kouzes and Posner (2017) explained how a leader's feedback is "the center of any learning process" (p. 257). They found that the absence of feedback can be equally detrimental to employees as receiving criticism. Kouzes and Posner suggested that feedback must be carefully paired with guidance so employees see it as an opportunity to improve rather than as criticism. It encourages growth and self-correction, and it may cultivate an openness to feedback in the future. Additionally, they recognized encouragement as the most important form of feedback. To encourage subordinates, they suggested that recognition be "personal, precise, and visible" (p. 261). This is only possible if leaders take the time to get to know their subordinates.

Prolonged stress associated with teaching can demoralize professionals, but supportive leadership can reduce absenteeism among employees (Schmid et al., 2017). Levels of teacher morale are dependent on relational and social aspects of leadership. Teachers seek to be respected and valued by their principals (Lambersky, 2016). Principals can foster satisfaction among faculty members by offering encouraging words, acknowledging teachers' hard work,

guarding faculty from unrealistic expectations, and providing time for recovery from the stresses of the day (Lambersky, 2016). Supportive leadership increases satisfaction and decreases stress levels for subordinates (Li et al., 2014). Teachers enjoy a sense of autonomy (Erichsen & Reynolds, 2019), and they show increased morale, engagement, and commitment when principals allow them to have a voice (Lambersky, 2016). Teachers prefer feedback given with a spirit of encouragement and growth mindset (Lambersky, 2016).

Li et al. (2014) used a quantitative-qualitative hybrid model to collect data to determine if a leader's emotional intelligence influenced the leader's preferences for combining leadership behaviors. The researchers focused on four combinations of pressure and support in the workplace: leadership support immediately after pressure; leadership support provided immediately before pressure; leadership support provided either immediately before or after pressure; and pressure applied first and leadership support provided at least 30 minutes later. They used vignettes to provide workplace scenarios for 204 full-time managers to rank in addition to an emotional intelligence questionnaire. Li et al. found that leaders' emotional intelligence is related to the combination in which they provide support and apply pressure to employees. Leaders with higher emotional intelligence preferred to provide support immediately after applying pressure. Leaders with the lowest emotional intelligence preferred to delay support more than 30 minutes after pressure was applied. The researchers suggested that providing support before pressure may cushion employees from negative emotions associated with the pressure. Providing support after pressure or delaying support may not be effective against the negative emotions that have already set in. Leaders with high emotional intelligence have the foresight to provide support in the most effective manner at the right time.

Clear communication is a key to improving the school environment (Meyer et al., 2009; Miraj et al., 2018). School leaders should say what they mean and act on it with clarity and sensitivity (Meyer et al., 2009). Clarity should include guidelines, rules, consequences, and supportive messages (Miraj et al., 2018). Stewart-Banks et al. (2015) concluded that effective communication is a practical asset for school principals. Effective skills may include the leader's tone of voice, word choice, and mannerisms when communicating with school employees. The researchers claimed effective communication skills play "an important role in the overall functionality and climate of the school" (p. 94).

Teachers have reported the desire to be heard by their leadership (Berkovich & Eyal, 2018; Tsang & Liu, 2016). Administrators who are unwilling to listen to teachers give the impression that they do not trust or care about the teachers' wishes or difficulties (Tsang & Liu, 2016). Berkovich and Eyal (2018) identified three reframing strategies for providing emotional support to teachers: empathetic listening, empowering messages, and normalizing messages. Empathetic listening was the most important strategy. An empathetic listener shows interest in what the speaker is saying and indicates interest and sympathy by using gestures and facial expressions. The goal of emotional support is to enhance well-being and foster a positive affective state among teachers (Berkovich & Eyal, 2018). A leader's open-mindedness and approachability work together in creating positive relationships with subordinates (Stewart-Banks et al., 2015). Subordinates feel more committed to their work tasks when they perceive that their opinions are welcomed by an open-minded leader. Open-mindedness also gives employees the impression that the leader sees multiple solutions and ways of doing things. One important way to give emotional support to employees is helping them feel like they have genuinely been heard.

Versland (2016) contended that relationships pave the way to building efficacy for leadership and faculty. Open communication is important for making sure teachers are informed and involved in the decisions that affect them (Lambersky, 2016; Tsang & Liu, 2016). Principals should communicate their vision clearly so that all stakeholders understand it and will invest themselves toward achieving the goal (Lambersky, 2016). Leaders who listen to what is important to others, integrate others' ideas into a shared vision, and generate excitement for a cause can elevate the motivation, morality, energy, and commitment of their subordinates (Kouzes & Posner, 2017). Social cognitive theory emphasizes the need for collectives to work together to accomplish their goals by trusting in the efficacy of the group to succeed (Bandura, 2000). Stewart-Banks et al. (2015) emphasized that having a positive rapport with employees is a prerequisite of modeling appropriate behavior for subordinates. Leaders who understand and support employees build trusting relationships with employees, which is critical for working together to accomplish organizational goals. Another way principals can build relationships is by taking the time to interact with staff, students, and parents. Daily mingling enables principals to see the needs of others and ascertain their expectations to respond appropriately (Stewart-Banks et al., 2015). Stewart-Banks et al. suggested that leaders work to alter their personality traits to meet the needs of institutional goals and expectations of stakeholders.

Teachers want to feel that they belong within the professional culture of the school (Skaalvik & Skaalvik, 2011). Shapira-Lishchinski (2012) suggested that teachers working in environments in which colleagues show low levels of care for each other are likely to choose absenteeism as a withdrawal behavior. Teachers who feel that they belong are better able to cope with emotional exhaustion and have less motivation to leave the profession. Skaalvik and Skaalvik (2011) found that feelings of belonging can buffer the effects

of exhaustion. Feelings of community are formed outside of collaborative norms and instructional duties (Erichsen & Reynolds, 2019). However, these strong collegial relationships do not buffer the negative effects of other workplace conditions, such as accountability pressures. Collegial relationships may be born of socialization, trust, respect, and openness (Kidger et al., 2016). Wu (2015) defined *school value* as the organizational standards that govern individual behaviors. Without this standard, individuals resort to their own value systems; thus, values throughout the organization may be inconsistent. One component of school value is *teacher autonomy*, or teachers' perceived control of themselves and their professional environment. Teacher autonomy is empowering. Wu found that school value and teacher autonomy are associated, and that school value is a predictor of teacher motivation. The psychological safety climate, psychosocial safety climate, and organizational climate are all dependent on leadership (Dollard & Bakker, 2010; Maamari & Majdalani, 2016).

Leaders can give priority to developing policies, practices, and procedures that develop and maintain a positive school culture (Dollard & Bakker, 2010; Maamari & Majdalani, 2017). Individuals who have elevated levels of emotional intelligence have greater abilities to interpret emotion-related information and make collectively beneficial decisions (Alkozei et al., 2019). For example, principals must protect faculty from work conditions that could cause psychological or social harm (Dollard & Bakker, 2010). The principal must also adapt interactions and communication to motivate the faculty (Maamari & Majdalani, 2017). Some leaders build morale and commitment by supporting teamwork (Miraj et al., 2018). Psychosocial safety climate can be enhanced by leaders facilitating opportunities for teachers to recover. Recovery includes interventions that emphasize healthy strategies for coping with work-related

stress, and it improves teachers' mental well-being (Garrick et al., 2014). Psychosocial safety climate has a positive relationship with recovery and engagement (Garrick et al., 2014).

High levels of emotional intelligence among leaders and subordinates improves communication, performance, stability, social relationships, levels of norming, feelings of responsibility, effective decision-making, and commitment (Maamari & Majdalani, 2017). Collective agency allows people to work together to achieve goals (Bandura, 2006). Supportive relationships enhance human abilities to cope with disappointments and problems and persevere (Bandura, 1999). Successful performance leads to higher personal and collective efficacy, thus improving well-being for those involved (Bandura, 1999). Specifically, high emotional intelligence is associated with well-being in terms of life balance and may reduce materialistic desires (Rūteliionė et al., 2022). Such activity creates social structures with set parameters and provides resources for human functioning (Bandura, 2006). A strong collective efficacy fortifies the group against obstacles and increases motivation to endure toward the shared vision (Bandura, 2006). Da'as et al. (2020) suggested that teachers need daily opportunities to discuss their practice to improve it. Doing so can significantly decrease teacher withdrawal behavior. Principals serve in a complex role riddled with intrapersonal and interpersonal challenges (Turk & Wolfe, 2018). Subordinates expect leadership to understand their own emotions and the emotions of others (Afzal et al., 2018). Da'as et al. (2020) emphasized leaders' innovative behaviors can have a positive influence on the collective that leads to better engagement from teachers. Leaders with high levels of emotional intelligence are better equipped to recognize and respond to follower emotion (Edelman & van Knippenberg, 2018), which is part of the fourth level of emotional intelligence theory, managing emotions (Mayer & Salovey, 1997).

Emotionally intelligent leaders obtain internal balance that helps maintain composure and regulate their emotions toward a productive outcome during challenging circumstances (Edbor & Singh, 2016; Rezvani et al., 2016), instill feelings of trust and cooperation among team members (Rezvani et al., 2016), and motivate other people (Afzal et al., 2018). Additionally, they develop emotional attachments with team members (Rezvani et al., 2016). Higher emotional intelligence predicts better social and business relationships (Mayer et al., 2008), and it arms people against stress-related burnout (Sánchez-Pujalte et al., 2021). More specifically, the managing emotions branch of emotional intelligence is associated with perceived quality of social interactions for both individuals and those with whom the individual is interacting (Lopes et al., 2016).

“Emotional intelligence refers to an ability to recognize the meanings of emotions and their relationships, and to reason and problem solve on the basis of them” (Mayer et al., 2000, p. 267). Emotions often result from interactions and relationships (Mayer et al., 2000). Accurate processing of emotions is an essential aspect of emotional intelligence if problems are to be solved with an appropriate reaction (Brackett et al., 2006). Clear perception, understanding, use, and management of emotions are valuable to the development of the leader’s self-efficacy (Mathew & Gupta, 2015; Mayer et al., 2016). Additionally, emotional intelligence is key to feeling happy and fulfilled at work (Edbor & Singh, 2016).

Emotionally intelligent principals may be equipped with characteristics and behaviors that are essential to building a school culture of high morale and engagement. Leaders who are adept at perceiving emotions are able to identify followers’ emotions based on facial clues and body language (Mayer et al., 2001). Leaders who can use emotions to facilitate thought are able to enhance their reasoning about emotions to adjust their thinking about the emotions (Mayer et al., 2001). Leaders who understand emotions are able to comprehend emotional information and

make transitions between emotions using abstract processes (Mayer et al., 2001). And, finally, leaders who can manage emotions are able to guide positive interactions that enhance positive emotions (Lopes et al., 2016). The literature has shown that leadership styles that embrace characteristics of emotional intelligence, such as transformational, authentic, charismatic, and ethical, are related to job satisfaction of subordinates. Emotional intelligence is a competency that can be taught and developed in leaders in order to benefit organizations (Stoller, 2021). Emotionally intelligent leaders inspire satisfaction. Deutsch (2021) suggested that leaders cannot reach their full potential if they do not engage in continuous emotional intelligence development. However, there is no body of literature that examines emotional intelligence of school leaders in terms of their generational affiliation.

Summary

This research is built on a foundation of Social Cognitive Theory (Bandura, 1986, 2000), Generational Cohort Theory (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013) and Emotional Intelligence Theory (Mayer & Salovey, 1997; Salovey & Mayer, 1990). Leaders are products and producers within the reciprocal relationship of their person, behaviors, and environment (Bandura, 1986, 1999, 2000). They facilitate the collective efficacy of their subordinates and are responsible for the organization's success or failure (Bandura, 1999, 2006). Leaders who are highly emotionally intelligent have abilities to manage their own feelings and the feelings of others to influence positive social and organizational outcomes (Mayer et al., 2016).

The Baby Boomer generation is retiring, members of Generation X have been patiently awaiting their positions to open up, and the Millennial Generation is seeking to make an impact on the workplaces in society (Lim & Epperly, 2013). Each cohort has unique personalities and

values that influence the organizational climate (Maier et al., 2015). They have different ideas of how they want to lead and how they want to be led (Anderson et al., 2017; Jena, 2016; Kupperschmidt, 2000). This research focuses on members of Generation X and the Millennial Generation. There is little empirical research to substantiate the similarities and differences in these cohorts, particularly pertaining to leadership (Twenge et al., 2010).

The researcher seeks to examine how the generations are similar and different in terms of their emotional intelligence abilities. The preceding literature review highlights emotional intelligence as a distinct intelligence that can be measured as an ability (Mayer et al., 2002). Leaders' emotional intelligence has a positive relationship with subordinates' job satisfaction (Miao et al., 2016). Transformational leadership and authentic leadership encompass many characteristics of emotional intelligence (Mathew & Gupta, 2015). Leaders who provide supportive leadership can curb some of the negative effects of the high stress school environment for teachers (Kidger et al., 2016). Supportive leadership behavior aligns with behaviors likely to be found with principals presenting characteristics of high emotional intelligence. The literature does not examine if there are differences in Generation X and the Millennial Generation's emotional intelligence abilities.

CHAPTER THREE: METHODS

Overview

The purpose of this quantitative study was to discriminate between school leaders in Generation X vs. the Millennial generation with respect to their emotional intelligence. The researcher used the Mayer-Salovey-Caruso-Emotional-Intelligence-Test (MSCEIT; Mayer et al., 2002) to measure the emotional intelligence of school principals. Questions about demographic information including participants' age, gender, and race were included within the survey. This chapter describes the research design, the research question and hypothesis, the participants and setting, the instrumentation, the procedures, and the data analysis of the study.

Design

The research design was non-experimental, quantitative, and correlational, using a cross-sectional survey as the method of data collection. A correlational design, in the context of this study, is defined as “research that involves collecting data in order to determine the degree to which a relationship exists between two or more variables (Fraenkel & Wallen, 2018, p. G-2). A correlational design was appropriate because it is not possible to manipulate any of the variables or naturally occurring groups of participants in a cross-sectional survey (Rovai et al., 2013). A correlational design does not verify cause and effect relationships, but does allow researchers to identify statistical associations between variables (Collier et al., 2010). The correlational design facilitated examination of the degree to which principals in two generational cohorts exhibit different levels of emotional intelligence, using the variables defined in Table 1.

Table 1*Definitions of Variables*

Variable	Conceptual definition	Functional definition	Level	Operational definition
Perceiving emotions	The ability to perceive emotions in oneself and others, including nonverbal perception, such as objects, art, stories, and music. (Mayer et al., 2002)	Predictor variable	Interval	Average scores for 50 items (E1 to E20 and A1 to A10) in the MSCEIT; Mayer et al., 2002.
Facilitating thought	The ability to generate, use, and feel emotion as necessary to communicate feelings or employ them in other cognitive processes (Mayer et al., 2002).	Predictor variable	Interval	Average scores for 30 items (F1 to F15 and B1 to B15) in the MSCEIT; Mayer et al., 2002.
Understanding emotions	The ability to understand emotions, how emotions combine and progress, and how emotions can be analyzed and predicted. (Mayer et al., 2002).	Predictor variable	Interval	Average scores for 32 items (C1 to C20 and G1 to G12) in the MSCEIT; Mayer et al., 2002.
Managing emotions	The ability to change emotions in oneself and to influence the emotions of others in order to produce certain outcomes (Mayer et al., 2002).	Predictor variable	Interval	Average scores for 29 items in the MSCEIT (D1 to D20 and H1 to H9); Mayer et al., 2002.
Generational affiliation	Generation X (born 1965-1980) or Millennial Generation (born 1981-2000); Hansen & Leuty, 2012; Jena, 2016; Lim & Epperly, 2013).	Criterion variable	Categorical	Two categories coded by: 1 = Generation X 2 = Millennial

Discriminant Function Analysis (DFA) was conducted to distinguish between principals in Generation X and principals in the Millennial Generation based on measurement of four branches of emotional intelligence (MSCEIT; Mayer et al., 2002). The mathematics of DFA is closely related to multivariate analysis of variance (MANOVA), which is a combination of

analysis of variance (ANOVA) and multiple regression. The variables are simply reversed. Specifically, the categorical independent variables in MANOVA and multiple regression become the dependent or criterion variables in DFA, while the linear combination of interval level dependent variables in MANOVA and multiple regression become the independent or predictor variables in DFA (Huberty & Olejnik, 2006).

Research Question

This study addressed the following research question and tested the associated null hypothesis:

RQ1: To what degree do the four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial?

Hypotheses

H₀1: The four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) do not discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial.

Participants and Setting

This section explains the population, participants, and setting of this study.

Population

The population for this study consisted of principals of schools in the northeastern United States. The study did not include assistant principals. The convenience sample was drawn from a target population of principals in school districts in the northeastern United States from fall of

2021 to spring of 2023. The sample was convenient to the researcher because the researcher lives in a northeast state. The state of the researcher's residence has 149 local school districts and 17 regional school districts (in which more than one town is included in the district). The researcher also contacted districts from surrounding states. Links to contact information for superintendents and principals are conveniently located on the state's departments of education websites. The researcher contacted over 1,000 district superintendents to obtain approval to survey elementary principals within their respective districts. Then, the researcher sent emails to principals with an attached consent form. The consent form explained the purpose and importance of the study, a summary of the survey requirements, the intent to publish results, and an emphasis on the voluntary nature of the study (See Appendix D). The email included a link to the online survey. By clicking on the link and taking the survey, the principals consented to participating in the study.

Participants

Type II errors may occur if the sample size is too small to identify significant relationships between the independent and dependent variables. The minimum sample size to avoid Type II errors using DFA was estimated by power analysis with the same procedure in G*Power used for MANOVA (Faul et al., 2007; Kang, 2021). The input variables were the effect size (Cohen's $f^2(V) = 0.15$ implying that a small proportion ($R^2 = 13\%$) of the variance was explained by the model (Soper, 2022); a conventional level of statistical significance ($\alpha = .05$); an adequate level of power ($1 - \beta = .8$); two mutually exclusive groups of participants (Generation X and Millennial Generation); and four predictor variables (perceiving emotions, facilitating thought, understanding emotions, and managing emotions). The recommended minimum total sample size was $N = 86$ (see Appendix F), which was achieved by drawing a

convenience sample from a population of about $N = 175$ public school principals located in educational districts in the northeast United States.

Setting

Public school principals were recruited by email. The link to the survey was sent to each individual's school district email. They were able to choose when and where they completed the assessment.

Instrumentation

Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)

Principals' emotional intelligence was measured by the Mayer-Salovey-Caruso Emotional Intelligence Test, or MSCEIT (Mayer et al., 2002). The test consists of two tasks for each of the four branches of emotional intelligence: perceiving emotions, using emotions to facilitate thought, understanding emotions, and managing emotions (Brackett & Mayer, 2003). During each task, the test takers choose an answer on a scale of one to five, indicating the degree of a particular emotion they perceive from the item. The perceiving emotions branch of the assessment asks participants to determine emotions expressed by pictures of faces or in pieces of art. The using emotions portion of the test asks participants to identify sensations associated with cognitive or behavioral tasks. Understanding emotions tasks asks the participant to answer questions about changing or blending of emotions. Finally, managing emotions tasks addresses emotional and social management in different scenarios (Salovey et al., 2003). An example question is, "What mood might be helpful when meeting in-laws for the very first time?" The question is followed by three emotions to rate on a scale of one to five, with one being "Not Useful" and five being "Useful."

The test consists of 141 items and takes 30-45 minutes to complete. Branch one, perceiving emotions, has 50 items – 30 faces and 20 pictures. Branch two, using emotions, has 30 items – 15 facilitation and 15 sensation items. Branch three, understanding emotions, has 32 items – 20 changes and 12 blends. Branch four, managing emotions, has 29 items – 20 emotional management items and 9 social management items. The items are scored using a general or expert consensus-based technique (Maul, 2012; Rivers et al., 2008). In general consensus-based scoring, scores are determined by proportions of choices made by a standardized sample. In expert consensus-based scoring, scores are compared to answers given by a panel of experts. In both cases, a final score for each task is determined by averaging the weighted scores for each item within the task (Maul, 2012; Rivers et al., 2008). Test administrators may choose from either scoring option (Rivers et al., 2008). The test is administered and scored online through the publisher, Multi-Health Systems (n.d.). MSCEIT provides seven scores: one for each of the four branches, one for each of two domains, and a composite emotional intelligence score (Multi-Health Systems, n.d.).

Brackett and Mayer (2003) found a test-retest reliability of $r = 0.86$ for MSCEIT over a three-week interval. Overall scores have different reliabilities depending on consensus or expert scoring. MSCEIT full-test split-half reliability is $r(1985) = 0.93$ and 0.91 for consensus and expert scoring respectively (Mayer et al., 2003). The four branch reliabilities for perceiving emotion, using emotions, understanding emotions, and managing emotions were in the range of $r(2204-2028) = 0.76-0.91$ for both types of scoring. Mayer et al. (2003) found the following goodness-of-fit indices for structural validity using the expert-consensus scoring and a four-factor model: Normed Fit Index (NFI) = 0.97; Tucker-Lewis Index (TLI) = 0.96; Root Mean Square Error of Approximation (RMSEA) = 0.04 (Mayer et al., 2003). These goodness-of-fit

values indicate that the sample data distribution is consistent with data distribution for a general population (Cangur & Ercan, 2015).

The MSCEIT has been used in many recent empirical studies (Edelman & van Knippenberg, 2018; Hellemann, et al., 2017; Kuo et al., 2019; Lanciano & Curci, 2015). Kuo et al. (2019) used MSCEIT version 2.0 to compare emotion processing deficits in people with schizophrenia and autism spectrum disorder. They determined that both groups' scores are compatible in all MSCEIT measured areas except for Facilitation and Management. Implications of this relationship include improved treatment for patients on the autism-schizophrenia spectrum. Edelman and van Knippenberg (2018) used MSCEIT to measure emotional intelligence scores of 84 organizational leaders. They determined that emotional intelligence is a predictor of appropriate responses to subordinates' emotions. The results imply that emotional intelligence professional development for leaders may benefit organizations (see Appendix E for steps the researcher took to secure permission to use MSCEIT).

Demographic Data

Multi-Health Systems (n.d.) collected demographic information within the MSCEIT survey instrument. Questions elicited the principals' gender, age, and race. This information is part of the MSCEIT survey and cannot be modified or edited.

Procedures

Following approval of the researcher's dissertation proposal by the dissertation chair and committee, the researcher asked permission to conduct the study from school districts' superintendents by email (See Appendix A). The researcher requested to contact the principals under each superintendents' leadership by email. Once the researcher obtained permission to contact principals from at least 30 districts, she submitted proofs of permission from

superintendents along with an application to the Liberty University's Institutional Review Board (IRB) for approval to proceed with the research study (see Appendix B).

Upon obtaining approval from Liberty University's IRB, the researcher emailed principals directly with an explanation of the study and a consent form that included the link to the online survey (See Appendix C). The consent form is clear that principals who click the link and complete the survey are consenting to participate in the study. The consent form explains the purpose and importance of the study, a summary of the survey requirements, the intent to publish results, and an emphasis on the voluntary nature of the study (See Appendix D). The researcher sent two follow-up emails within four weeks of sending the initial invitation to participate. In addition to 141 MSCEIT questions, the web-based survey included minimal demographic information: gender, age, and race. Participants were asked their names, but all personal information were replaced with a code that links the survey data with personal information in order to protect individuals' anonymity. The coded data and personal information were stored securely and separately. Personal information and other data were password-protected on the researcher's personal computer. Only the researcher, her university research chair, her university certified methodologist, and her hired statistician had access to personal information and coded data. Once the initial data was coded, the personal information was accessed on a needs-only basis.

Data Analysis

After the principals submitted their surveys, the response data were uploaded into IBM SPSS v. 27.0 for analysis. The data were screened to assure that the responses to the 141 MSCEIT items were complete. To avoid biased results, the respondents who did not complete the whole of the instrument were excluded. The data analysis involved Discriminant Function

Analysis (DFA), which is a statistical technique similar to regression analysis that is designed to distinguish between mutually exclusive groups of participants based on the relative strengths of their correlations with multiple predictor variables. DFA builds a predictive model of group membership, based on the best linear combinations of predictor variables that provide the strongest discrimination between two or more groups of participants (Miller, 2016). DFA is commonly used by researchers to predict the most appropriate group to which each individual participant in a survey belongs, based on the participants' quantitative responses to a questionnaire (Cacoulis, 2014). For example, in the context of research in an educational setting, Bogler (2002) used DFA to discriminate between two groups of teachers, specifically those with a low level of job satisfaction and those with a high level of job satisfaction, using a cross-sectional survey to measure the predictor variables that included the occupational perceptions of the teachers and the principals' leadership styles.

The following is a description of how the DFA was conducted:

1. The demographic characteristics of the principals (i.e., gender, age, and race) were summarized (counts and percentages of each category).
2. The principals were divided into two groups depending on their year of birth, coded by 1 = Generation X and 2 = Millennium generation.
3. The assumptions of DFA were tested, specifically : (1) the predictor variables do not deviate from normality, using kurtosis and skewness statistics and the Shapiro-Wilk test ($p > .05$), and (2) they are not multicollinear (i.e., strongly correlated with each other). Violation of multicollinearity was indicated by Pearson's correlation coefficients $> .8$ (Yoo et al., 2014). Uncorrelated or weakly correlated normally distributed variables were preferable to facilitate the

greatest discrimination between the two groups using DFA. Violation of these assumptions would compromise the results (Huberty & Olejnik, 2006).

4. The descriptive statistics (minimum, maximum, mean, standard deviation, and 95% confidence intervals) of the four predictor variables, classified by the two groups of principals, were computed and compared.

5. DFA was performed using IBM SPSS v. 27 (IBM, 2021).

6. The Analysis Case Processing Summary table summarized the dataset in terms of valid and excluded cases.

7. The Group Statistics table presented the distribution of the predictor variable in the two groups of principals.

8. The Function table indicated the first and (if required) the second canonical linear discriminant functions. Each function projected the predictor variable into a dimension that best separates or discriminates between the two groups.

9. The Eigenvalue table presented the eigenvalues, the magnitudes of which were indicative of the ability of the discriminant function model to distinguish between the groups.

10. The Percent of Variance table gave the proportion of discriminating ability of the four predictor variables found in the discriminant function. This proportion is calculated as the proportion of the function's eigenvalue to the sum of all the eigenvalues.

11. The Cumulative Percentage table gave the cumulative proportion of discriminating ability, which collectively add up to 1.0.

12. The Canonical Correlation table presented the linear combinations of the variables within each discriminant function that have the maximum correlations with each other.

13. The Wilks' Lambda statistic tested the null hypothesis that the canonical correlations for each discriminant function were significant. The null hypothesis was rejected if $p < .05$.

14. The Chi-square statistic tested the null hypothesis that the discriminant function was equal to zero. This hypothesis was rejected if $p < .05$. The degrees of freedom (df) for the given function were based on the number of groups present in the categorical variable and the number of predictor variables.

15. The Standardized Canonical Discriminant Function Coefficients are equivalent to the standardized coefficients in a multiple regression model and range from -1 through 0 to +1. The magnitudes of these coefficients will indicate how strongly each of the predictor variables is related to the groups.

16. The Structure Matrix or discriminant loading represented the correlations between the predictor variables and the discriminant functions.

17. The Functions at Group Centroids were the mean scores of the discriminant function for each group.

18. The Classification Processing Summary listed the participants who were successfully classified.

Summary

The purpose of this study was to use a correlation design to examine the degree to which four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminated between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial. The null hypothesis was that the four branches of emotional intelligence did not discriminate between the two categories of principals. This null hypothesis was tested using Discriminant Function Analysis (DFA), in

which the four branches of emotional intelligence were the independent or predictor variables, and the two categories of principals were the dependent or criterion variables. DFA is commonly used to predict the most appropriate group to which each individual participant belongs, based on the participants' quantitative responses to a cross-sectional survey.

The Mayer-Salovey-Caruso-Emotional-Intelligence-Test (MSCEIT; Mayer et al., 2002) was administered to measure the four branches of emotional intelligence in a convenience sample consisting of at least $N = 86$ school principals (estimated by power analysis). The sample was drawn from a population of about $N = 175$ principals of schools located in many different school districts in the northeastern United States. The MSCEIT consists of 141 items, classified into four branches, and each branch has been validated using test-retest reliability, split-half reliability, and goodness of fit indices.

Ethical issues have been considered to protect the participants. After IRB approval and the submission of the principals' surveys, the response data were uploaded into IBM SPSS v. 27.0 for analysis. The data were screened to assure that the responses to the 141 MSCEIT items were complete. To avoid biased results, the respondents who did not complete the instrument were excluded. The demographic characteristics of the principals (i.e., gender, age, and race) were summarized. The principals were divided into two groups, depending on their age, coded by 1 = Generation X and 2 = Millennial generation. The assumptions of DFA were tested, specifically that the predictor variables do not deviate from normality and are not multicollinear. The descriptive statistics (range, minimum, mean, standard deviation and 95% CI) of the four predictor variables, classified by the two groups of participants, were computed and compared. A description is provided above to explain how the large amount of SPSS output was interpreted. The outcome of the analysis is a discriminant function model indicating which of the four

branches of emotional intelligence are most closely correlated with the principals belonging to Generation X and which are most closely correlated with the principals belonging to the Millennial Generation.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this quantitative study using a correlational design was to discriminate between the emotional intelligence of school leaders in Generation X and the emotional intelligence of school leaders in the Millennial Generation. The results will contribute to a gap in the literature about the generational affiliation and emotional intelligence of school leaders. The Mayer-Salovey-Caruso-Emotional-Intelligence-Test was used to measure the emotional intelligence of $N = 86$ school principals from the northeastern United States. Discriminant Function Analysis (DFA) was conducted to distinguish between the two groups of principals based on four categories of emotional intelligence. This chapter presents the statistical evidence to answer the following research question (RQ1) and reject the associated null hypothesis (H_01),

Research Question

RQ1: To what degree do the four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial?

Null Hypothesis

H₀₁: The four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) do not discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial.

Descriptive Statistics

Multi-Health Systems computed the 144 item scores in the MSCEIT provided by $N = 88$ respondents (a total of $144 \times 88 = 12,672$ scores) and sent the scores to the researcher in a Microsoft Excel file. This file was imported into the data editor of SPSS. After screening the data for ineligible respondents, two cases were excluded, because they did not report their ages, and so their generational affiliation could not be ascertained. Nine missing values (identified as blank cells in the data editor) were found among the data required to measure the four levels of emotional intelligence: three items for facilitating thought, four items for managing emotions, one item for perceiving emotions, and one item for understanding emotions. The nine missing values accounted for less than 1% of the total number of scores. The "Replace Missing Values" option in the SPSS data editor was selected to impute the missing values with the mean scores for the corresponding level of emotional intelligence. Replacing less than 1% of the missing values with mean scores would not bias the results of the statistical analysis (Lin & Tsai, 2020).

The total number of principals who completed the survey with no missing item scores ($N = 86$) were classified into two groups depending on their age. The members of Generation X, born between 1965 and 1980 ($N = 58, 67.4\%$), were 42 to 57 years of age at the time of the survey. The members of the Millennial Generation, born between 1981 and 2000 ($N = 28, 32.6\%$), were 36 to 41 years of age at the time of the survey.

Table 2 compares the frequency distributions of gender and race in the two groups. The majority of the principals were female in both Generation X ($n = 34, 58.6\%$) and the Millennial Generation ($n = 18, 64.3\%$). The race of most the principals in Generation X was White ($n = 54, 93.1\%$). The race most of the principals among the Millennials was also White ($n = 24, 85.7\%$). Cross-tabulation tests indicated no significant associations between the two generations versus

gender; $\chi^2(1) = 0.25, p = .62$; or between the two generations versus race; $\chi^2(3) = 4.26, p = .62$.

The differences in emotional intelligence between the two groups of principals were therefore assumed to be caused by generational factors and not by differences in gender and/or race.

Table 2

Demographic Characteristics of Two Groups of Principals

Category	Generation X (<i>N</i> = 58)		Millennial (<i>N</i> = 28)		Total (<i>N</i> = 86)	
	<i>n</i>	% (within generation)	<i>n</i>	% (within generation)	<i>n</i>	% (within generation)
Gender						
Female	34	58.6%	18	64.3%	52	60.5%
Male	24	41.4%	10	35.7%	34	39.5%
Race						
White	54	93.1%	24	85.7%	78	90.7%
Black	4	6.9%	2	7.1%	6	7.0%
Hispanic	0	0.0%	1	3.6%	1	1.2%
Other	0	0.0%	1	3.6%	1	1.2%

Tables 3 and 4 present the descriptive statistics and the tests for normality for the four levels of emotional intelligence classified by the two groups of principals. The normality of the frequency distributions was indicated by $p > .01$ for the Shapiro-Wilk test statistics, the closeness of the mean and median scores, reflecting central tendency, the low skewness and kurtosis statistics within the normal limits of ± 1.0 , and the low Z-scores, within the normal limits of ± 3.3 . The only exception was the distribution of understanding emotions among the Millennials. This distribution was leptokurtic (Kurtosis = 1.09) and negatively skewed (Skewness = -1.08) with a small Shapiro-Wilk test statistic reflecting deviation from normality; $S-W = 0.89, p = .01$. However, the Z-scores ($Z = 0.49$ to 0.81) were small, indicated that understanding emotions did not contain any outliers, and it is the presence of outliers, not skewness or kurtosis, that compromise the results of inferential parametric statistics (Aggarwal, 2017).

Table 3*Descriptive Statistics for Emotional Intelligence in Generation X (N = 58)*

Emotional Intelligence	Descriptive Statistics						Normality				
	<i>M</i>	<i>Mdn</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Kurtosis</i>	<i>Skewness</i>	<i>S-W</i>	<i>p</i>	<i>Z-scores</i>	
								(58)		<i>Min</i>	<i>Max</i>
Perceiving Emotions	0.48	0.49	0.06	0.35	0.58	-0.83	-0.46	0.95	.02	-2.17	0.77
Facilitating Thought	0.43	0.44	0.04	0.34	0.50	-0.44	-0.48	0.96	.07	-2.30	1.71
Understanding Emotions	0.56	0.57	0.05	0.44	0.63	-0.52	-0.50	0.96	.05	0.44	0.63
Managing Emotions	0.42	0.42	0.03	0.36	0.49	-0.76	0.16	0.98	.58	0.36	0.49
Total score	1.90	1.90	0.12	1.62	2.16	-0.06	-0.27	0.98	.61	1.62	2.16

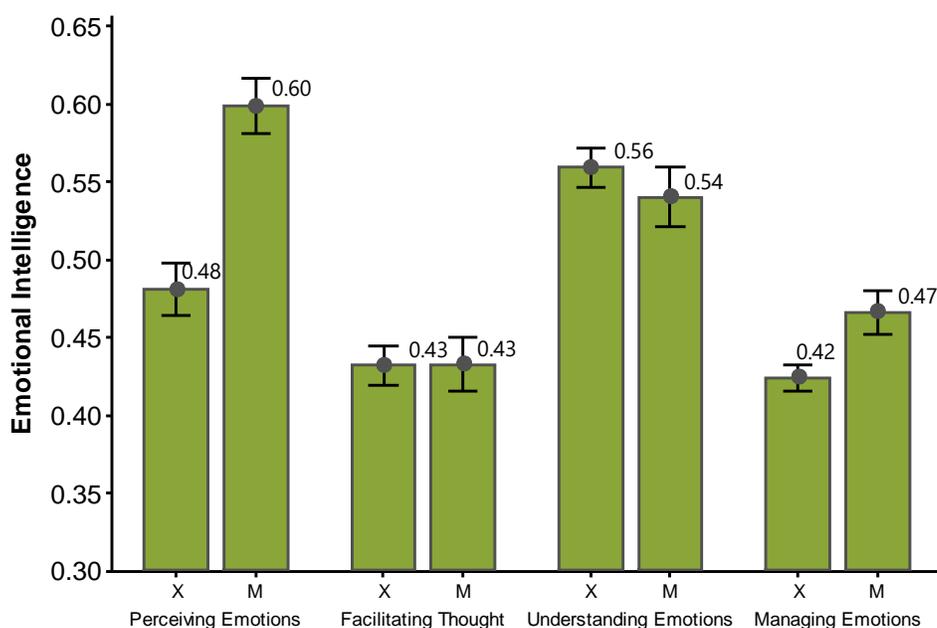
Table 4*Descriptive Statistics for Emotional Intelligence in Millennials (N = 28)*

Emotional Intelligence	Descriptive Statistics						Normality				
	<i>M</i>	<i>Mdn</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Kurtosis</i>	<i>Skewness</i>	<i>S-W</i>	<i>p</i>	<i>Z-scores</i>	
								(28)		<i>Min</i>	<i>Max</i>
Perceiving Emotions	0.60	0.61	0.05	0.50	0.67	-0.72	-0.44	0.96	.30	-0.21	1.83
Facilitating Thought	0.43	0.44	0.05	0.33	0.51	-0.41	-0.63	0.94	.10	-1.98	1.52
Understanding Emotions	0.54	0.55	0.05	0.41	0.60	1.09	-1.08	0.89	.01	0.41	0.60
Managing Emotions	0.47	0.48	0.04	0.40	0.52	-0.95	-0.81	0.93	.07	0.40	0.52
Total score	2.04	2.02	0.11	1.78	2.21	0.05	-0.51	0.97	.46	1.62	2.21

The respective mean scores for perceiving emotions and managing emotions among Generation X ($M = 0.48$ and 0.42) were less than among the Millennials ($M = 0.60$ and 0.47). The respective mean scores for facilitating thought and understanding emotions among Generation X ($M = 0.43$ and 0.56) were the same or similar to the mean scores among the Millennial generation ($M = 0.43$ and 0.54). Because the four branches of emotional intelligence were normally distributed, the four variables could be compared and summarized using 95% confidence intervals (CI). An error bar chart was drawn to compare the four branches of emotional intelligence because this is the most useful type of chart to visualize the differences between two or more mean scores (Cumming & Finch, 2005, p. 170). The chart displayed in Figure 1 compares the mean scores (\bullet) \pm 95% CI (I) for the four branches of emotional intelligence between the two groups of principals.

Figure 1

Comparison of Emotional Intelligence Between Two Generations of Principals

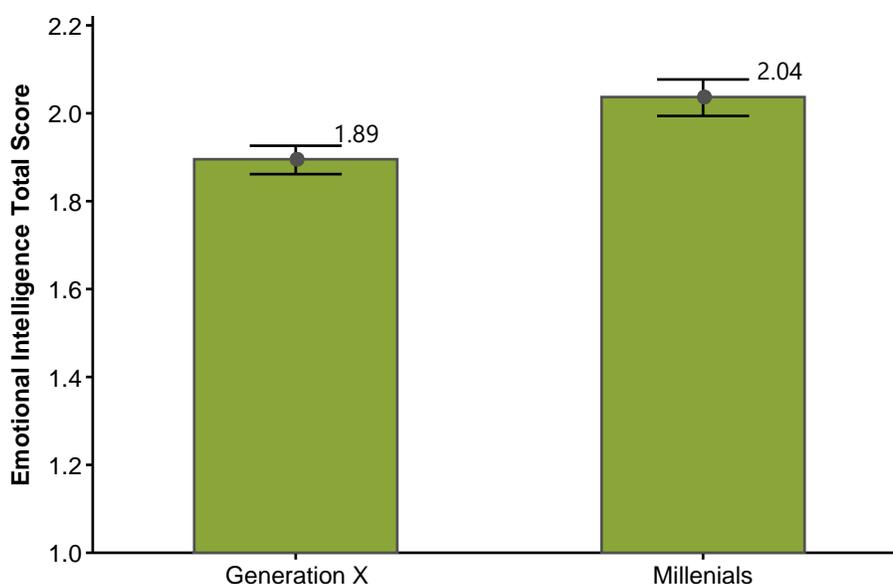


Note: X = Generation X; M = Millennial Generation; \bullet = mean score; I = 95% CI

The "confidence intervals and how to read pictures of data" method (Cumming & Finch, 2005, p. 170) was used to interpret Figure 1. The 95% CI of two mean scores are significantly different from each other at $p < .05$ if they do not overlap (Pandis, 2013). The 95% CI for perceiving emotions among Generation X [0.58, 0.61] were higher than the Millennium Generation [0.50, 0.246]. The 95% CI for managing emotions among Generation X [0.48, 0.45] were also higher than the Millennium Generation [0.43, 0.42]. In contrast, the 95% CI for facilitating thought among Generation X [0.44, 0.41] overlapped with the 95% CI for facilitating thought among the Millennium Generation [0.45, 0.42]. The 95% CI of for understanding emotions among Generation X [0.53, 0.56] overlapped with the 95% CI for understanding emotions in the Millennium Generation [0.54, 0.57]. Figure 2 compares the total emotional score (the sum of scores for the four branches) between the two generations of principals. The scores for the Millennials ($M = 2.04$) were significantly higher than for Generation X ($M = 1.89$).

Figure 2

Comparison of Total Emotional Intelligence Score in Two Generations of Principals



Note:; ● = mean score; [] = 95% CI

Results

The assumptions of DFA were tested prior to hypothesis testing. The acquired sample size ($N = 86$) provided sufficient power to discriminate between the two groups at the .05 level of statistical significance. The tests for normality and outliers in Tables 3 and 4 indicated that the scores for the four branches of emotional intelligence did not violate the assumptions of DFA. The matrix of correlation coefficients in Table 5 shows that the four predictor variables were not multicollinear (i.e., not strongly correlated with each other). The lack of multicollinearity was reflected by the weak correlation coefficients (Pearson's $r = -0.04$ to 0.48).

Table 5

Matrix of Pearson's r Correlation Coefficient to Test for Multicollinearity

	VIF	Perceiving Emotions	Facilitating Thought	Understanding Emotions
Perceiving Emotions	1.26			
Facilitating Thought	1.06	-.016		
Understanding Emotions	1.32	-0.04	0.37	
Managing Emotions	1.55	0.48	0.19	-0.04

If the four branches of emotional intelligence were very strongly correlated with each other (e.g., Pearson's $r > .8$), then DFA would not provide meaningful results because it would not be possible to discriminate between the two groups of principals (Yoo et al., 2014). Uncorrelated or weakly correlated normally distributed variables were advantageous because this combination of predictors facilitated a high level of discrimination between the two groups of principals using DFA (Huberty & Olejnik, 2006). Moreover, the differences in the sample sizes between the two groups of principals (i.e., $N = 58$ in the Generation X and $N = 28$ in the Millennials) did not compromise the results of DFA because SPSS includes two options: "All

groups are equal" and "Compute from group sizes" (IBM, 2021). The latter option was chosen to compensate for the differences in sample size of the two groups by weighting the DFA statistics.

Interpretation of the results of DFA enabled rejection of the null hypothesis that the four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) did not discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial. The statistics in Table 6 indicated a very high level of discriminating ability between the four branches of emotional intelligence. Only one canonical linear discriminant function was identified with an eigenvalue of 1.22 and a canonical correlation of 0.74. This function was statistically significant ($p < .001$). There was no second function, because one function explained 100% of the variance in the four branches of emotional intelligence. If the first function had not explained 100% of the variance, then a second function would be necessary to explain the remaining variance.

Table 6

Discriminating Ability of the Four Branches of Emotional Intelligence

Function	Eigen value	% of variance explained	Canonical correlation	Wilk's lambda	Chi-Square	<i>df</i>	<i>p</i>
1	1.22	100.0	0.74	0.45	65.65	4	<.001

The Wilks' lambda statistic tested the null hypothesis that the canonical correlations for the discriminant function were not statistically significant. This null hypothesis was rejected (Wilks' lambda (4) = 0.45, $p < .001$). The Chi-Square statistic tested the null hypothesis that the discriminant function was equal to zero. This hypothesis was also rejected (χ^2 (4) = 65.65 $p < .001$), implying that the discriminant function was statistically significant.

Table 7 presents the four standardized canonical discriminant function coefficients (β) equivalent to the standardized coefficients in a multiple regression model. The magnitudes of the β coefficients indicate how strongly each of the four predictor variables discriminate between the two groups of principals. Table 7 also presents the structure matrix coefficients (λ) equivalent to the loading coefficients in principal components factor analysis. The magnitudes of λ indicate the strength of the correlations between the predictor variables and the two groups. Table 7 shows that perceiving emotions ($\beta = .840, \lambda = .860$) was the strongest discriminator between the two groups. Managing emotions ($\beta = .436, \lambda = .552$) was the second strongest discriminator. In contrast, understanding emotions ($\beta = -.225; \lambda = -.168$) and facilitating thought ($\beta = .192; \lambda = .044$) with coefficients close to zero did not significantly discriminate between the two groups.

Table 7

Standardized Canonical Discriminant Function Coefficients

Predictor Variable	Standardized discriminant function coefficient (β)	Structure matrix coefficient (λ)
Perceiving Emotions	.840	.860
Managing Emotions	.436	.552
Understanding Emotions	-.225	-.168
Facilitating Thought	-.192	.005

The following explanation and Table 8 present the discriminant function, equivalent to a multiple regression model. The strongest standardized canonical discriminant function coefficients with the greatest discriminatory and predictive ability were perceiving emotions ($V = 14.32$) and managing emotions ($V = 13.34$). The standardized canonical discriminant function coefficients with the weakest discriminatory and predictive ability were facilitating thought ($V = -4.07$) and managing understanding emotions ($V = 4.68$).

Table 8*Discriminant Function*

Predictor Variable	Coefficient (V)
Constant	-8.92
Perceiving Emotions	14.32
Managing Emotions	13.34
Facilitating Thought	-4.07
Understanding Emotions	-4.68

Figures 3 and 4 illustrate the frequency distributions of the canonical discriminant function scores for Generation X and the Millennials.

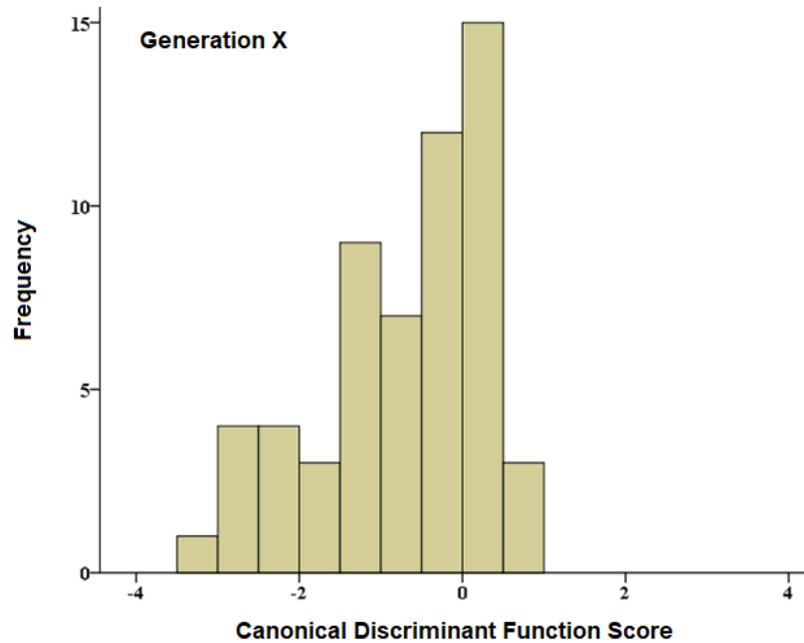
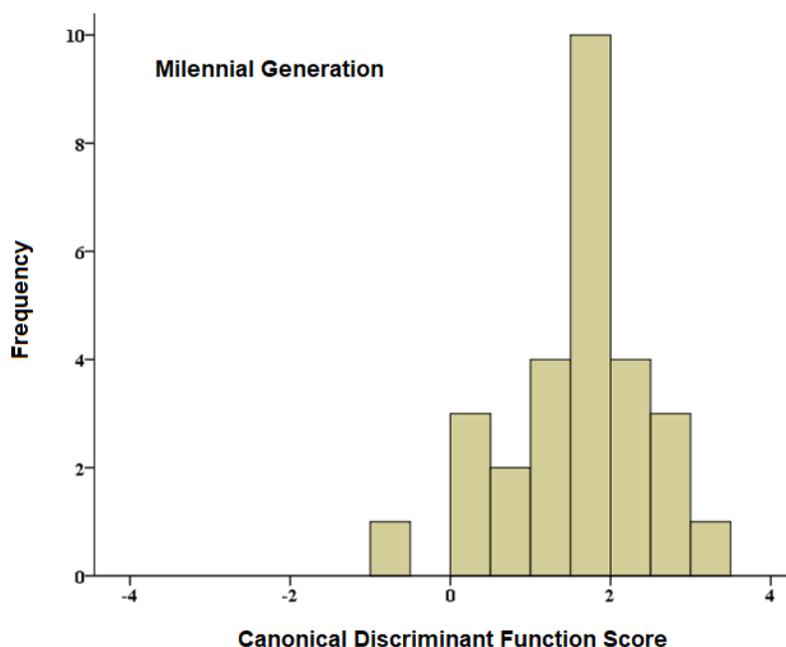
Figure 3*Frequency Distribution of Discriminant Function Scores for Generation X*

Figure 4

Frequency Distribution of Discriminant Function Scores for Millennials



The mean score at the group centroid (i.e., the point at which the four predictor variables intersected with each other in multivariate space) was negative for Generation X ($M = -0.76$, $SD = 1.05$). The mean score at the group centroid for the Millennials was positive ($M = 1.58$, $SD = 0.89$). The differences between the frequency distributions of the scores, and the mean scores at the group centroids, reflected the overall higher emotional intelligence levels of the Millennials, compared with the lower emotional intelligence levels of Generation X. Finally, the classification table indicated that 90.7% of the cases were correctly classified.

Summary

The convenience sample was divided according to the participants' years of birth into principals in Generation X ($N = 58$) and principals in the Millennial Generation ($N = 28$). The demographic compositions of both groups were dominated by White female principals.

Sufficient evidence was obtained to address the research question: To what degree do the four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial? The results of the DFA enabled rejection of the null hypothesis because the four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) strongly discriminated between the two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial. The DFA statistics determined the degree to which each of the four branches of emotional intelligence was most closely correlated with the principals belonging to Generation X and which of the four branches was most closely correlated with the principals belonging to the Millennial Generation. The levels of perceiving emotions and managing emotions were identified as the two branches of emotional intelligence that most strongly discriminated between the principals in Generation X and the principals in the Millennial Generation. However, the two groups of principals could not be so easily discriminated with respect to their levels of understanding emotions and facilitating thoughts. The degree of discrimination based on the four branches of emotional intelligence was 100%, meaning that all participants were correctly classified as members of Generation X or the Millennial Generation. Chapter 5 will present a discussion of these findings in the context of the literature.

CHAPTER FIVE: CONCLUSIONS

Overview

Chapter Four presented the results of a descriptive, inferential, and exploratory analysis of measures of emotional intelligence measured by the Mayer-Salovey Emotional Intelligence Test, or MSCEIT (Mayer et al., 2002). The convenience sample of school principals was drawn from the population in school districts in the northeastern United States during the from 2021-2023. The research design was non-experimental, quantitative, and correlational, using a cross-sectional survey as the method of data collection. Chapter Five presents a discussion of the results of this study in the context of the literature, considers the implications and limitations of the findings, and provides recommendations for future research.

Discussion

The purpose of this quantitative study was to discriminate between the emotional intelligence of sitting school leaders in Generation X (born between 1965 and 1980) and the emotional intelligence of school leaders in the Millennial generation (born between 1981 and 2000). The following null hypothesis was rejected: The four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) do not discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial. This study contributed to the vast body of literature about emotional intelligence and helped to fill the void in the empirical research regarding generational differences in leadership. The levels of perceiving emotions and managing emotions as the branches of emotional intelligence most strongly discriminated between the two generations of principals. Perceiving emotions includes identification of emotions in self, others, and the arts; while managing emotions requires people to regulate emotions of self and others (Salovey et al.,

2003). In contrast, the two generations of principals could not be discriminated with respect to their levels of facilitating thought, defined as employing feelings for thinking and communication, nor by understanding emotion, which includes comprehending, synthesizing, and appreciating emotions (Salovey et al., 2003).

This research is built on a foundation of Social Cognitive Theory (Bandura, 1986, 2000), Generational Cohort Theory (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013), and Emotional Intelligence Theory (Mayer & Salovey, 1997; Salovey & Mayer, 1990) as they pertain to educational leaders. Each of these theories involves human interaction and its influence on the sociocultural environment. In particular, Social Cognitive Theory and Emotional Intelligence Theory concur that social interactions influence others (Bandura, 1999, 2006; Lopes et al., 2003). In accordance with Social Cognitive Theory and Emotional Intelligence Theory, Generational Cohort Theory focuses on how people are shaped by their environment, including, but not limited to, social interactions (Arsenault, 2004; Kupperschmidt, 2000; Lim & Epperly, 2013).

Comparing and contrasting the findings of this study in the context of the existing literature is difficult because limited empirical research has been conducted to examine the generational differences between organizational leaders during the current transition period between Generation X and the Millennials (Galdames & Guihen, 2020). Members of Generation X grew up during socially and financially turbulent times (Jena, 2016). They are reported to value certifications, education, and hard work to reach leadership positions (Jena, 2016; Lim & Epperly, 2013). Although they value collaboration and relationships in the workplace, they are known to be independent thinkers (Jena, 2016; Kupperschmidt, 2000; Lim & Epperly, 2013). Members of the Millennial generation are called by many names, including GenMe (Zachara,

2020), Selfie Generation (Anderson et al., 2017), and Trophy Generation (Gentry et al., 2011) because of their focus on self. They are reported to value globalization, advances in technology, and increased cultural diversity (Zachara, 2020). Twenge et al. (2010) found that they experience a dissonance between wanting more and working less. However, Millennial employees desire to work collaboratively on meaningful tasks (Gentry et al., 2011), and they desire leaders who are ambitious (Holden & Raffo, 2014) and provide personal attention (Galdames & Guihen, 2020).

The findings of this study, based on generational differences in emotional intelligence, are consistent with the conclusion that individuals from Generation X and the Millennium Generation may differ in how they lead their subordinates (Ahn & Ettner, 2014; Arsenault, 2004; Maier et al., 2015) and possibly the value they place on the relationships that they have with their subordinates (Kupperschmidt, 2000). The results of this study are consistent with Arsenault's (2004) contention that generational differences are distinct enough to be considered a diversity issue; however, it was not possible to take a “generational perspective” to evaluate how each generation of principals acknowledged the strengths of individuals from the other generations (Kupperschmidt, 2000, p.65).

The finding that Millennial principals generally have a higher level of emotional intelligence than principals in Generation X is consistent with the conclusion that Millennials place high value on the humanity of work, meaning that they want to work with and for people whose values are like their own (Ng et al., 2010). This finding is also consistent with the conclusion that Millennial employees desire to work collaboratively on assignments that are meaningful (Gentry et al., 2011). They are ambitious and determined (Holden & Raffo, 2014). The quality of the Millennial principles to understand and manage emotion is consistent with the need for them to provide feedback and personal attention to subordinates (Galdames & Guihen,

2020; Lim & Epperly, 2013; Maier et al., 2015). The emotional intelligence of Millennial principals implies that they perceive that their subordinates require recognition and respect (Anderson et al., 2017; Maier et al., 2015) and want to take part in decision-making processes (Maier et al., 2015). Other behaviors that are consistent with the high levels of emotional intelligence of school principals include being practical, ecofriendly (Lim & Epperly, 2013), creative (Anderson et al., 2017; Lim & Epperly, 2013), inclusive (Anderson et al., 2017), independent, self-confident, and self-expressive (Maier et al., 2015).

Implications

The practical implications of this study may be linked to the finding that principals in the Millennium generation were more aware of others' emotions and how to manage their emotions than the principals in Generation X. The implications are that that the Millennial Generation principals may have more self-motivation and empathy that characterizes transformational leadership in the workplace (Mathew & Gupta, 2015). Higher levels of ability to perceive and manage their emotions may be related to promoting a shared vision with peers, colleagues, subordinates (Bradford & Braaten, 2018); working with subordinates to identify changes (Jain & Duggal, 2018); and setting a positive tone to improve the organizational culture (Tai & Abdull Kareem, 2019).

Millennial principals with a higher level of ability to perceive and manage their emotions may be better able than Generation X principals to create a climate of warmth, support, and stability in their working environment (Maamari & Majdalani, 2017). Moreover, the Millennial principals may be better able to create feelings of trust and cooperation in highly stressful working conditions (Rezvani et al., 2016) and have better communication with their peers, colleagues, and subordinates (Parrish, 2015). Moreover, Millennial principals with elevated

levels of ability to perceive and manage their emotions may ultimately be better able to inspire motivation, optimism, self-confidence, insight, responsibility, commitment, and efficiency (Jain & Duggal, 2018; Maamari & Majdalani, 2017; Rajesh, et al., 2019; Rezvani et al., 2016).

One of the theoretical implications of this study is that the findings support Generational Cohort Theory which posits that that cohorts of individuals are influenced by the period in which they grew up (Arsenault, 2004; Lim & Epperly, 2013); that "generational characteristics" affect how individuals behave (Kupperschmidt, 2000, p. 65); and that new generations bring new ways of looking at situations and solving problems (Anderson et al., 2017). Another theoretical implication of this study is that the findings support Emotional Intelligence Theory, which posits that people's observations of others' emotions may prompt people's behaviors and that emotional perception opens the door to the goals and interests of others (Côté et al., 2010). Principals who are members of the Millennial Generation who have developed a high level of ability to perceive and manage emotions (e.g. anger, fear, disgust, sadness, and happiness) in themselves and others should theoretically be able to make social judgements in personal and professional situations by making inferences that determine how others will react (van Kleef, 2009).

Limitations

The results of this study were limited by threats to external and internal validity that are common to the results of all types of cross-sectional survey. The use of a convenience sample meant that the results lacked external validity because they could not be generalized to all principals at all times and in all school districts in the USA. Because the principals and the measuring instruments used in this study were not randomly selected from the population of all principals and all measuring instruments, the results applied only to the small sample of

individuals who volunteered to participate and who completed the Mayer-Salovey Emotional Intelligence Test. The results may not apply to the vast population of principals who did not complete the test (Stangor, 2015).

Liberty University's quantitative dissertation template and checklist require that quantitative studies adhere to null hypothesis significance testing (NHST). However, the following limitations of NHST should be noted according to contemporary statistical literature. The principals who participated in the survey were not recruited by random sampling but were volunteers; however, *p* values "cannot be meaningfully interpreted without random sampling" (Hirschauer et al., 2020, p. 71) and "It is pointless to estimate the *p* value for non-random samples" (Filho et al., 2013, p. 31). The implications are that the statistically significant results of DFA presented in this dissertation, which assumed random sampling, may not be reproducible. Moreover, in the last decade, many critics have condemned null hypothesis significance testing in the context of research in the social and behavioral sciences, especially in social psychology. One of the reasons for calls to abandon NHST is that the misinterpretation of *p* values and statistical significance has resulted in the publication of many irreproducible findings (Anderson, 2020; Andrade, 2021; Granero et al., 2020; Green, 2021; Lyu et al., 2020; Nosek et al., 2022; O' Donahue, 2021; Richters, 2021; Van Dongen & Van Grootel, 2021). The failure to reproduce findings when research is replicated has led to the claim that the social and behavioral sciences suffer from a "replication or reproducibility crisis" (Laraway et al., 2019). Reliance on null hypothesis significance testing may be the "root cause of the slow theoretical progress and replication failures of psychological research" (Richters, 2021, p. 366). In an article entitled "The Tragedy of Psychological Theory," Green (2021, p.1) asserted that

The unreflective acceptance of NHST as the disciplinary standard for the statistical analysis of data has, in effect, trapped psychologists in a

methodological box that makes it difficult to see other options. Psychology, as I see it, needs to engage in a thoroughgoing overhaul of its graduate training program – one that reduces focus on NHST-oriented statistical procedures.

A serious limitation which threatened the internal validity of the statistics is that the interpretation of the results did not comply with the guidelines of the American Statistical Association asserting that p values do not provide reliable evidence to test a hypothesis or model and that the concept of statistical significance has expired (Matthews, 2021). Over 800 scientists in over 50 countries have agreed that "It's time for statistical significance to go" (Amrhein et al., 2019, p. 307). Moreover, this study did not comply with the strong recommendations demanding that Null Hypothesis Significance Testing (NHST) must no longer be taught to students (Ioannidou & Erduran, 2021). With regards to the use of NHST by students, Goodman (2019, p. 26) highlighted that

We've learned one has only to determine whether to reject at the 5 percent or 1 per cent level. Then the statistician can grandly draw obvious conclusions about data from any scientific field by proclaiming significance or non-significance. Such nonsense is taught usually by professors who have had minimal contact with the applications of statistical methods to scientific problems.

The results of this study were compromised by the ecological fallacy, which is a type of cognitive bias inherent among researchers who believe that the statistics computed to describe a sample (e.g., a mean value) must automatically apply to every individual member of that sample (Dyjak, 2019). The ecological fallacy is especially prevalent among researchers interested in statistics that characterize the differences between generations (Lunceford, 2018). Lunceford points out that "it is difficult to generalize about an entire generation, as individuals will not always act in accordance with their generation's values and norms" (p. 372). The ecological fallacy is consistent with the concept that generational stereotypes do not apply to every individual member of a cohort (Lim & Epperly, 2013). The implications are that higher levels of

perceiving and managing emotions did not necessarily characterize every individual principal within the Millennial Generation, whilst lower levels of emotional intelligence did not necessarily characterize every individual principal within Generation X. Some demographic categories of principals may exhibit higher levels of emotional intelligence test than others; however, the sample size was too small and the analytical procedures were too simple to identify differences in emotional intelligence between demographic sub-groups (e.g., classified by gender, race, length of experience, location, or other personal factors).

Recommendations for Further Research

More quantitative research is necessary to examine the extent to which generational and demographic factors are related to the levels of emotional intelligence of school principals. Alternative quantitative methods that do not depend on the interpretation of p values, statistical significance, or confidence intervals, such as ordination and classification are applicable to explore and compare the patterns of performance of participants in educational settings (Battaglia et al., 2016; Govindasamy & Velmurugan, 2018; Mindrila et al., 2017; Omar et al., 2020; Panduranga et al., 2019). For example, cluster analysis is an exploratory and not a confirmatory method, implying that inductive rather than deductive reasoning is used to generate hypotheses rather than test hypotheses (Backhaus et al., 2021; Jaeger & Banks, 2022). To address the research question of this study, hierarchical cluster analysis using Ward's method based on squared Euclidean distances could be conducted to visualize the differences in the patterns of distribution of the four combined branches of emotional intelligence among a sample of principals. The results of the analysis are output as a tree diagram or dendrogram, wherein a ranked series of dichotomous branches reflected the relative distances between each individual participant. The farther apart the branches, the more distantly associated are the participants at

the end of each branch. The closer the branches, the more closely associated are the participants at the end of each branch.

More qualitative research is also necessary because irreproducible and misleading results often contaminate the outcomes of quantitative research in educational settings (Fraenkel & Wallen, 2018). Further qualitative research is recommended underpinned by the constructivist paradigm. This qualitative approach assumes that knowledge can be acquired more easily by inductive reasoning through subjectively interpreting the meanings that people give to their lived experiences in a social context, rather than by deductive reasoning through the statistical analysis of quantitative data (Mogashoa, 2014). More qualitative research, underpinned by constructivism, may help researchers understand why there is so much variability in the effects of generational factors on the emotional intelligence of school principals. A qualitative researcher needs to visit a purposive sample of school principals to explore the many non-quantitative factors that the interviewees perceive may influence their emotional intelligence. A hermeneutical phenomenological approach may reveal richer and more detailed personal insights into the factors associated with the development of emotional intelligence in school principals in a specific educational setting than can be gained from the statistical analysis of quantitative data (Guillen, 2019). The qualitative data analysis should not be based on descriptive or inferential statistics, but on a narrative analysis, to tell an interesting story, based on the subjective interpretation of the language, gestures, opinions, perceptions, and lived experiences of the interviewees from a first-person point of view (Josselson & Hammack, 2021). A narrative qualitative approach based on hermeneutical phenomenology may provide more meaningful data to address questions beginning "Why" that cannot so easily be answered by a quantitative approach, such as these:

1. Why do Millennial principals appear to have higher levels of emotional intelligence than principals in Generation X?
2. Why do Millennial principals appear to display a high level of ability to perceive emotions in themselves and others, including nonverbal perception such as objects, art, stories, and music?
3. Why do Millennial principals appear to display a high level of ability to change emotions in themselves and to influence the emotions of others in order to produce certain outcomes?
4. Why is there apparently little or no difference between Millennial and Generation X principals with respect to facilitating thought and understanding emotions?

This dissertation therefore ends with more questions than answers.

Summary

Chapter Five presented a discussion of the results of this study in the context of the literature, considered the implications and limitations of the findings, and provided recommendations for future research. The following null hypothesis was rejected: The four branches of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) do not discriminate between two categories of principals classified by their generational affiliation: (1) Generation X and (2) Millennial. Results indicated a strong discrimination between the two generations of principals pertaining to their higher levels of perceiving emotions and managing emotions. However, principals could not be strongly discriminated by their lower levels of facilitating thought nor understanding emotions.

Contemporary literature indicates that each generation shows distinct characteristics because of their experiences, but no other literature has explored the generations in relation to

emotional intelligence. The results imply that school leaders from the Millennial Generation may have better awareness and management of their own emotions and the emotions of others.

Limitations include that the sample used in this study was a convenience sample of volunteers rather than a random sample, interval validity related to p values, and external validity related to ecological fallacy. Further research is needed to examine the extent to which generational and demographic factors are related to the levels of emotional intelligence of school principals.

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APPENDICES

Appendix A

Email to Superintendents

Dear [Superintendent],

I am a doctoral student at Liberty University, and I am conducting a dissertation study regarding emotional intelligence of school leadership and their generational affiliation. I respectfully request your permission to reach out to the principals in your district to ask for their participation in an emotional intelligence survey. Asking your permission is a preliminary step toward getting my dissertation proposal approved by my university and the IRB committee. Thus, I will not reach out to principals immediately upon getting your permission. Instead, I will reach out once I have received my university's permission during this fall semester (2021).

Principals were asked to complete the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) online. The survey takes approximately 30 minutes to complete. Data from the survey were kept secure and confidential. Participation in this study is voluntary. Results of the research were used in partial fulfillment of Liberty University's dissertation requirements. I aspire to publish the results in a peer reviewed journal in the future.

Please reply to this email as an indication of your consent for me to recruit principals in your district for this study. I will email them directly to request participation, explain my research, and provide them with the link to the survey. Thank you for considering your principals' participation in this research.

Thank you for your time,

April D. Clark, M.A.Ed.

Doctoral Candidate at Liberty University

Appendix B

IRB Approval

[External] IRB-FY21-22-642 - Initial: Initial - Exempt



do-not-reply@cayuse.com
To: Clark, April; Reason, Casey (School of Education)



Wed 3/9/2022 4:41 PM

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

LIBERTY UNIVERSITY

INSTITUTIONAL REVIEW BOARD

March 9, 2022

April Clark
Casey Reason

Re: IRB Exemption - IRB-FY21-22-642 A Quantitative Comparison of Emotional Intelligence Scores for Generation X and Millennial School Leaders

Dear April Clark, Casey Reason,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46.104(d):

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix C

Email to principals

Dear Principal [Name],

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to determine if there are differences between the emotional intelligence of school principals from Generation X and the emotional intelligence of school principals from the Millennial Generation, and I am writing to invite eligible participants to join my study.

Participants must be public school principals born between the years of 1965 and 2000. Participants, if willing, will be asked to complete the Mayer-Salovey-Caruso Emotional Intelligence Test online. The link to access the survey can be found within this email. It should take approximately 30 minutes to complete the survey. The online survey is proprietary and requires you to enter a name in order to be submitted. To ensure your anonymity, please **do not** enter your real name. You may enter a pseudonym instead. Any names/pseudonyms provided will be immediately removed from the dataset prior to analysis.

To participate, please click <http://s.mhs.com/y3A6Fm> or <http://s.mhs.com/Cy4i2MK> to complete the online survey. Please answer each question within the survey and submit it when it is completed.

A consent document is attached to this email. The consent document contains additional information about my research. After you have read the consent form, please click the link within this email to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the survey.

Sincerely,

April Clark
Doctoral Student at Liberty University
aclark117@liberty.edu

Appendix D

Consent form

Title of the Project: A Quantitative Comparison of Emotional Intelligence Scores for Generation X and Millennial School Leaders

Principal Investigator: April Clark, Doctoral Student at Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. Participants must be public school principals born between the years of 1965 and 2000. Taking part in this research project is voluntary. Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of this quantitative study is to determine differences between the emotional intelligence of school leaders in Generation X and the emotional intelligence of school leaders in the Millennial Generation. Leaders with high emotional intelligence inspire content and committed employees. There is abundant research about emotional intelligence and leadership; however, there is no literature about generational affiliation and emotional intelligence of school leaders.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Click the link within the recruitment email to complete the Mayer-Salovey-Caruso Emotional Intelligence Test online survey.
2. Complete each question within the survey and submit when finished (30 minutes).
3. The online survey is proprietary and requires you to enter a name in order to be submitted. To ensure your anonymity, please **do not** enter your real name. You may enter a pseudonym instead. Any names/pseudonyms provided will be immediately removed from the dataset prior to analysis.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study. Benefits to society may include increased public knowledge about emotional intelligence and generational affiliation. Results of this study may have implications for school leadership training.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher and a third-party statistician will have access to the records. Data collected from you may be shared for use in future research studies or with other researchers.

- Participants will remain anonymous. Any names provided will be removed from the results of online surveys. Participants are invited to use a pseudonym instead of their names.

- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or your school district. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is April Clark. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at aclrk117@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Casey Reason, at creason@liberty.edu.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of this document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

Appendix E

Permission to Use Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)

The researcher has contacted the publisher, Multi-Health Systems to learn the requirements of using MSCEIT to collect emotional intelligence scores from principals. The following lists the steps the researcher must take to use the instrument for this study. The researcher was in this process following IRB approval from Liberty University since there are some up-front financial obligations associated with securing the measurement instrument.

1. In order to use this assessment, the researcher must meet the training requirements. This includes having taken and passed an assessment course within my graduate studies. The researcher will submit a university transcript that proves she has completed an assessment course. If her assessment course is not adequate, her supervisor's experience with assessment were considered. The researcher will work with her chair to submit the publisher's form to them for review.
2. Once approved, the researcher is required to purchase a MSCEIT manual which were shipped directly to her.
3. The MSCEIT is administered and scored online using the MHS Talent Assessment Portal – called TAP. The research participants will take the MSCEIT online via an Invitation link that the researcher will send to them. The company will charge the researcher for each test that is completed.
4. After the administration is completed, the researcher will log into the TAP account to score these, and she will receive the Scored Data Set Reports.
5. Once the researcher is ready to complete the dissertation, Multi-Health Systems will allow her to include a maximum of six MSCEIT items within the document. None of these six should include images.

Appendix F

Power Analysis using G*Power

