

**Temperament Types, Job Satisfaction, Job Roles, and Years of Service of Doctor of Educational Leadership Candidates and Graduates**

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## **Abstract**

Some organizational studies examining the relationship between job satisfaction, and temperament type have indicated marginal to significant correlations between the two variables (Herzberg, Mausner, and Snyderman., 2000; Keirse, 1998; Spector, 1997). Other studies examining the relationship between job satisfaction, temperament type, job roles, and years of service have produced mixed results (Jennings, 1999). One purpose of this survey study was to examine the extent to which there is a relationship between job satisfaction and temperament of doctoral candidates and graduates. A second purpose for this survey study was to examine the extent to which there is a relationship between job satisfaction and job role. The third purpose for this survey study was to examine the extent to which the relationship between job satisfaction and job role is affected by temperament. The fourth purpose of this survey study was to examine the relationship between job satisfaction and years of service. The fifth purpose for this survey study was to examine the extent to which the relationship between job satisfaction and years of service is affected by temperament. The methodology involved a purposeful sampling of 45 doctoral candidates and graduates enrolled in cohorts 1-9 at a small, private liberal arts university in the Midwest. Respondents completed the Job Satisfaction Survey (Spector, 1997) and self-administered Keirse Temperament Sorter®-II (Keirse, 1998) online questionnaire. Data were collected from doctoral candidates and graduates to determine level of job satisfaction. Finally, factorial ANOVAs were used to test the hypotheses for each research question. Data results were indicated that temperament, job role, and years of service were affected by satisfaction with promotion. Job role affected the satisfaction with the nature of work and supervision. Satisfaction with contingent rewards was

affected by years of service. One implication for action based on results from this study could provide encouragement for employers in school organizations to implement a temperament type measurement when evaluating the best placement for school employees in various job roles. Employers could periodically use a job satisfaction measure to determine satisfaction facets among employees to evaluate the culture of the organization.

## **Dedication**

This dissertation is first humbly dedicated to Jesus Christ, my Lord and Savior, who sent an abundance of angels to watch over me during this incredible journey. I also dedicate this dissertation to my late husband, Michael. His unconditional love, uplifting words of encouragement, and unselfish acts of support always kept me motivated to imagine and realize that accomplishing a life's dream was possible. Michael's voracious desire to celebrate the completion of this study will be forever etched in my soul. May he rejoice from heaven's doorstep as we celebrate this accomplishment. This work is also dedicated to my parents who taught me at an early age that hard work and perseverance would lead to my dreams being fulfilled and to my sister who encouraged and supported me every step of the way.

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## **Chapter One**

### **Introduction**

Studies in temperament, job satisfaction, job roles, and years of service in an organization are of interest to those in the educational setting. It is important to understand how all of these variables influence who is hired, the climate in the workplace, and overall success of the organization. Research on these variables has contributed to a body of knowledge supporting the importance of matching an individual's temperament with the job role to the job they are hired to perform (Levin & Stokes, 1989; Watson & Slack, 1993). When the match is successful, then the employee is likely satisfied and will stay for an extended period. One approach to ensure employee job satisfaction is to examine the relationship between a person's temperament type and satisfaction.

Temperament refers to an individual's behavioral patterns which has been a topic heavily researched for many decades. Major research theorists who have contributed to the large body of knowledge on temperament include Carl Jung, Katharine Briggs, Isabel Briggs-Myers, and David Keirsey. According to Keirsey (1998), Carl Jung suggested in the 1920s that people have unique differences and claimed that individuals have a host of internal instincts referred to as "archetypes" (p. 3). Furthermore, Jung (1923) believed people have a natural inclination towards extroversion or introversion combined with feeling, thinking, sensation, and intuition. For example, Myers & Myers (1995) suggested an introvert who responds by thinking tends to be on a quest to analyze their own identity and life's aspirations. Ideally, they would like everything they do to

correspond with their personal values. Furthermore, the Seeker wants to live a life as true to themselves as possible and continually strives to impact the surrounding environment.

Katharine Briggs and Isabel Briggs-Myers expanded Jung's work to develop the Myers-Briggs Type Indicator (MBTI) that identified sixteen patterns of behavior and feelings, which they categorized as four typologies (Myers & Myers, 1995). David Keirsey, author of *Please Understand Me and Please Understand Me II* identified four temperaments, aligned to those typologies, which he referred to as Troubleshooters, Stabilizers, Seekers, and Analyst (Keirsey, 1998). Keirsey's theory led to the Keirsey Temperament ®-II Sorter (KTS®-II), an instrument he developed to measure the various temperament types.

Job satisfaction is of great interest to people who work in organizations and researchers who study employees in their jobs, Spector (1997) has suggested that job satisfaction is considered an important statistical predictor of employee attitudes and job stability (p. 1). Furthermore, job satisfaction is the primary variable in a large body of organizational research (Bolger, 2001; Judge & Klinger, 2008; Spector, 1997).

Researchers and theorists who have contributed to the body of knowledge on job satisfaction include Fredrick Taylor, Edwin Locke, Timothy Judge, Paul Spector, and Fredrick Herzberg. Taylor (1911) is recognized for developing scientific management, which has influenced modern industry. Locke (1976), a noted psychologist is widely recognized as a pioneer in goal-setting theory. Judge (1993) has contributed heavily to research, publishing over 130 articles in referenced journals relating job satisfaction and disposition. Spector, a professor at the University of South Florida developed the Job Satisfaction Survey (JSS), which assess overall job satisfaction as well as pay, promotion,

supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication (Spector, 1997). Herzberg, author of *The Motivation to Work* (2001), developed the Two-Factor theory based on Abraham Maslow's Hierarchy of Needs theory.

Job role was defined by Spector (1997) as the "required pattern of behavior for an individual in the organization" (p. 39). Empirical studies have been conducted to examine managerial roles of educational leaders identifying categories and types of roles each play in a school organization (Bossert, Dwyer, Rowan, & Lee, 1982; Rizzo, House, & Lietzman, 1970). Rizzo et al. (1970) utilized a questionnaire to measure role conflict and ambiguity. Findings suggested a correlation between organizational and managerial practices, and leader behavior with employee satisfaction, anxiety, and inclination to leave the organization (Rizzo et al. (1970). Bossert, et al. (1982) conducted a review of scholarly literature to understand the instructional management role of a school administrator and student learning. School-level variables identified in the literature review and research were "instructional organization, school climate, influence behavior, and principal management" (p. 34).

An additional variable that has been studied in conjunction with job satisfaction is years of service (Oshagbemi, 2000). The definition used to describe an employee's years of service is the length of time an employee works with the current employer (Jennings, 1999). Some studies have indicated that years of service, regardless of how it is measured, may be a more stable predictor of job satisfaction than other factors (Bedeian, Ferris, & Kacmar, 1992; Staw & Ross, 1985; Tett & Meyer, 2006).

Interest in examining the relationship between temperament, job satisfaction, job role, and years of service has dominated research over several decades. Beginning in ancient times, Hippocrates and Galen developed temperament theories based on human physiology. In modern times, the work of Jung, Myers and Briggs, and Keirsey brought about a renewed awareness in temperament. The work contributed by Taylor, Locke, Judge, Spector, and Herzberg have largely enhanced job satisfaction studies by showing that job satisfaction is correlated to job role and years of service variables that are found in the work place.

### **Background**

Historically, temperament theory may be traced back to ancient times. Interest in temperament began with Hippocrates's proposal that people are born with certain dispositions to behave in definite ways (Keirsey, 1998). Galen expanded Hippocrates' ideas with identifying the balance of bodily fluids that determine a person's actions and attitudes. Bodily fluids identified by Galen were blood, mucus, black, and yellow bile.

Temperament theory was largely forgotten or disregarded during the Middle Ages and only examined intermittently throughout Europe during the 16<sup>th</sup> through 19<sup>th</sup> centuries (Keirsey, 1998). Renewed interest surfaced in the United States during the early 19<sup>th</sup> century and into the 20<sup>th</sup> century. As an example, during the 1920s, behavior theorists began to explore the idea that while no particular temperament was present at birth, people naturally responded to environmental stimulation (Keirsey, 1998). Jung believed that while one archetype or attitude is no more significant than another, people have a natural tendency toward one of the two basic attitudes identified as introversion and extroversion (Jung, 1923). According to Keirsey (1998), Jung labeled the functions



or psychological types as sensation, intuition, thinking, and feeling which were developed to describe a person's character preference that relate to tendencies people use to perceive and judge information as these relate to the world (p. 3). Furthermore, Jung identified the psychological types as Thinking Types, Feeling Types, Intuiting Types, and Sensing Types, which he combined with the basic attitudes, extroversion, and introversion to create what he identified as archetypes (Keirsey, 1998).

Beginning in the early nineteenth century temperament studies focused on two opposing beliefs. Interest in some temperament studies focused on people's differences based on race, religious preference, political party, and other group associations, while other studies focused on persons as individuals with unique characteristics (Winter & Barenbaum, 1999). Additionally, interest among researchers occurred when investigators searched to understand temperament differences and developed the measures used to assess intelligence (Winter & Barenbaum, 1999). Because of the onset of World War I, additional interest in temperament research continued with the development of diagnostic testing to measure military personnel stability status brought on by stress related to combat conditions. During and after World War II, other research studies investigated personality traits and human behavior to advance understanding of people in the workplace (Myers & Myers, 1995; Winter & Barenbaum, 1999).

Job satisfaction is the most frequently studied variable in organizational behavior research and has experienced a rich and varied history (Spector, 1997). Studies designed to investigate the nature and causes of job satisfaction began in the 1930s; although examining attitudes of workers in the job situation can be traced back to 1911, when

Fredrick Taylor developed the principles of scientific management theory (Locke, 1976). Edwin Locke (1976), a modern job satisfaction theorist has provided several theories, which explain reasons employees feel satisfied in their work. Locke (1976) defined job satisfaction as a “fulfilled emotional state resulting from evaluation of a person’s job or work experience” (p.1304). According to Locke (1976), Taylor believed employees who “accepted the scientific management philosophy” and received the highest possible wages with the least amount of exhaustion were satisfied with work (p. 1298). Paul Spector, (1997) described job satisfaction as how people feel about their jobs (p. 2). The researcher, suggesting that job satisfaction is typically assessed as an attitudinal variable, proposed most modern researchers tend to examine cognitive processes rather than underlying needs (p. 2). From Spector’s research, the Job Satisfaction Survey was developed to assess nine facets of satisfaction as well as overall job satisfaction. Other theoretical and empirical contributions to job satisfaction literature have been provided through the studies of Timothy Judge. Judge has conducted research examining employee attitudes and job satisfaction to provide greater understanding. Judge’s studies have analyzed job satisfaction and multidimensional psychological responses including evaluative, emotional, and behavioral components to a person’s job (Judge, Hulin, & Dalal, 2009).

During the last several decades of the 20<sup>th</sup> century, industrial researchers and behaviorists have attempted to profile temperament types of employees and determine individual traits that lead to job satisfaction (Keirsey & Bates, 1984; Judge et al., 2009; Spector, 1997; Watson & Hillison, 1991). Investigators have produced rich and diverse, yet inconsistent findings examining the relationship between temperament type and

overall job satisfaction (Furnham, Petrides, Jackson, & Cotter, 2002; Bono & Judge, 2003; Judge, Bono, & Locke, 2000; Judge, Heller, & Klinger, 2008; Judge, Heller, & Mount, 2002; Judge, et al., 2009; Judge, Rodell, Klinger, Simon, & Crawford, 2013; Keirse, 1998; Keirse & Bates, 1984; Levin & Stokes, 1989; Saari & Judge, 2004; Spector, 1997; Staw. & Ross, 1985; Watson & Hillison, 1991). Some studies have revealed a strong correlation between a person's emotional adjustment and job satisfaction (Judge, Erez, & Bono, 1998) while other investigations have suggested that job dissatisfaction results from emotional instability (Judge, et al., 2002). Although studies may show some correlation between temperament and job satisfaction, Spector (1997) suggested research examining temperament traits and job satisfaction has "failed to provide significant insight into the type of traits that lead to job satisfaction" (p.51). This is because varied results have been provided with limited theoretical explanations that relate particular traits and job satisfaction (Saari & Judge, 2004; Spector, 1997).

A work motivation theory related to job satisfaction and referred to as the Two-Factor Theory was developed by Fredrick Herzberg. Herzberg extended Maslow's needs hierarchy model to develop the Two-Factor theory (Herzberg, et al., 2002). Maslow's Hierarchy of Needs theory is a model based on order of needs beginning with the most basic required sustaining life, and extending to growth needs found at the highest order on the hierarchal pyramid (Huitt, 2007). Maslow's motivational theory describes the progression of need satisfaction and motivation necessary to reach each order on the pyramid model. Herzberg's motivational theory explains how motivational factors and hygiene factors affect a person's attitude about work (Flanagan, 1954). Herzberg used the job satisfaction motivational and hygiene factors that are a derivative

of the Critical Incident Technique first identified by John Flanagan for job study and performance appraisal (Flanagan, 1954). The Critical Incident Technique involves asking workers to identify a series of probing questions, which relate to the evaluation of good and bad job performance incidents (Flanagan, 1954). Based on data gathered from studies involving a large number of accountants and engineers, recognition, achievement, responsibility, the work itself, and their related feeling are more commonly associated with job satisfaction than dissatisfaction (Flanagan, 1954). According to Miner (2005), employees were asked, “describe a time when you felt exceptionally good or a time when you felt exceptionally bad about your job” (p. 68). The Herzberg motivational factors found to be determiners of positive job satisfaction include achievement, recognition, responsibility, job tasks, and opportunity for promotion. Hygiene factors include salary, organization policies, supervision, interpersonal relations, and working conditions.

A variable considered an important factor for understanding job satisfaction is job role. Roles in organizations are defined as characteristic behavior patterns (Biddle, 1986). Spector (1997) explained that job roles can be “associated with job positions or titles, but they are not identical” (p. 39). For example, each employee can have various roles, but not everyone with the same job title has the same role in all situations. To develop further understanding of job roles, Mintzberg developed ten managerial roles and divided the roles into three categories, which are identified as informational, interpersonal, and decisional (Mintzberg, 1973; Welch, 2002). Informational roles include monitor, disseminator, and spokesperson. Interpersonal roles identified are

figurehead, leader, and liaison. Decisional roles include entrepreneur, disturbance handler, resource allocator, and negotiator (Mintzberg, 1973).

An additional variable that may affect job satisfaction is years of service to an organization (Ma, Samuels, & Alexander, 2003; Oshagbemi, 2000). Years of service is referred to as the number of years a person has been employed in the current workplace (Jennings, 1999). A number of factors may be attributed to the reasons individuals remain employed with the same organization for a length of time. These may include opportunity for promotion, pay, and job security. Employees with more years of service can contribute to the organization. First, long term employees may be more productive in the work process. Second, employees with job longevity may include the ability to work and relate to colleagues (Jennings, 1999). Third, long term employees may likely pass down valuable skills to new employees and serve as mentors in the process (Jennings, 1999). Finally, veteran employees provide stability to the work environment and create a sense of confidence among coworkers (Jennings, 1999).

Temperament, job satisfaction, job roles, and years of service are important variables that may influence who is hired, the climate in the workplace, and overall success of organizations. To understand modern temperament theories, researchers have examined the topic that was first studied in ancient times. Modern job satisfaction and motivational theorists have studied factors related to the work place since the early twentieth century. Understanding temperament types and level of job satisfaction continues to be of interest among organizational leaders in the twenty-first century workplace. Placement of employees in appropriate job roles and establishing a productive work environment may be accomplished with measurement tools that are

designed to identify an employee's temperament type with level of job satisfaction.

Organizations may experience a sense of employee stability and find success in work productivity when employees remain with the group over a length of time.

### **Statement of the Problem**

During times when organizations are seeking to establish successful and productive work environments, organizational leaders should examine factors that promote job satisfaction among employees. Furthermore, employers in Pre K 12 and higher education settings can establish successful and stable work environments that will create opportunities for people who find satisfaction in working with co-workers and supervisors (Spector, 1997). As employers examine additional factors that promote job satisfaction, supervisors should consider the temperament types of their employees. Hiring workers who are enthusiastic about the type of work related activities they perform creates satisfied workers and increased production. Employers understand that employees who are motivated to achieve and perform in a job role that fits their temperament type are inclined to stay in a job over a length of time. Placing employees in job roles that are compatible with temperament types may ensure increased years of employment with the organization and consequently establish a successful and stable work environment. Furthermore, employees who stay for a period of time may be motivated to work closely with co-workers, find satisfaction in opportunities for promotion, and experience satisfaction from receiving contingent rewards. While some studies have been conducted in the business setting, fewer studies can be found in the educational setting. Examining the affect temperament has on job satisfaction, job roles, and years of service in a school setting will help school leaders understand how to

successfully ensure a stable and successful working environment for education employees.

### **Purpose Statement**

One purpose of this survey study was to examine the extent to which there is a relationship between job satisfaction and temperament of doctoral candidates and graduates. A second purpose for this survey study was to examine the extent to which there is a relationship between job satisfaction and job role. The third purpose for this survey study was to examine the extent to which the relationship between job satisfaction and job role is affected by temperament. The fourth purpose of this survey study was to examine the relationship between job satisfaction and years of service. The fifth purpose for this survey study was to examine the extent to which the relationship between job satisfaction and years of service is affected by temperament.

### **Significance of the Study**

This study is significant because it involved an examination of perceived job satisfaction and temperament types of educational leadership doctoral candidates and graduates. The study is also significant because it explored the relationship between job satisfaction and various job roles of doctoral educational leadership graduates and candidates. Furthermore, the study is significant because it examined the extent to which a relationship exists between job satisfaction and years of service doctoral candidates and graduates were employed with the current employer. The study is significant because it provides information concerning variables that may affect job satisfaction for higher education instructors and administrators in higher education settings. Considering the need for school leaders to hire individuals that are satisfied in their job, this study adds to

a body of knowledge concerning variables that may affect job satisfaction for PK -12 educators, PK-12 administrators, higher education instructors, and higher education administrators. Such information could prove beneficial to university educational leadership programs for doctoral candidates and graduates.

### **Delimitations**

Lunenburg and Irby (2008) define delimitations as “self-imposed boundaries set by the researcher on the purpose and scope of the study” (p. 134). Data are delimited to those obtained from doctoral graduates and candidates in nine cohorts from 2005-2012 at a small, private liberal arts university. The study was delimited by the population of educators who come from diverse settings. Additionally, the study was delimited to a survey and temperament sorter. Generalizations can be made to a population possessing similar attributes.

### **Assumptions**

The assumptions made were that the responses on the JSS and KTS®-II are honest, accurate, and valid measures of the doctoral candidates and graduate’s level of job satisfaction and temperament type. Additionally, assumptions were made that the individuals sampled do not differ significantly from other people with similar characteristics. Other assumptions were the Job Satisfaction Survey (JSS) and Keirsey Temperament Sorter® II (KTS®-II) were appropriate to obtain the extent of person’s job satisfaction and temperament traits. It was further assumed that the candidates and graduates understood the instructions given to complete all instruments. A final assumption was the candidates and graduates provided honest responses to the survey questions and temperament sorter items.



## Research Questions

**RQ 1.** To what extent is there a relationship between job satisfaction and temperament?

**RQ 2.** To what extent is there a relationship between job satisfaction and job role?

**RQ 3.** To what extent is the relationship between job satisfaction and job role affected by temperament?

**RQ 4.** To what extent is there a relationship between job satisfaction and years of service?

**RQ 5.** To what extent is the relationship between job satisfaction and years of service affected by temperament?

## Definition of Terms

**Communication.** Spector (2007) defined the term as a job satisfaction factor that describes the distribution of information within establishment or organization.

**Contingent rewards.** Spector (2007) described the term as recognition and gratitude for a job well done.

**Coworkers.** Job satisfaction facet referred to the professional relationship with whom individuals work with; professional colleagues (Spector, 2007).

**Fringe benefits.** This is the Job satisfaction facet referred to as the “monetary and non-monetary benefits” that may be included with the employment position (Spector, 2007).

**Hierarchy of Needs theory.** Maslow proposed that people are motivated by a predictable hierarchy of needs identified in five steps. Maslow identified needs in terms of physiological, safety, social, esteem, and self-actualization. The theory is based on the

premise that as each of the needs on each step become significantly satisfied, the next need emerges. While no need is fully satisfied, a substantially satisfied need is not the source of motivation. In order to provoke motivation in a person, the level of the hierarchy that person is currently on needs to be the focus on satisfying needs at or above that step (Robbins & Judge, 2009).

**Job role.** Spector (1997) referred to the term as a requisite pattern of behavior for an individual in the work organization.

**Job Satisfaction.** A term referred to as a pleasurable or positive emotion a person experiences based on job appraisal or job experiences (Locke, 1976).

**Job Satisfaction Survey.** Paul Spector (1994) developed this survey to rate employee attitudes about the job and aspects of the job using a Likert-scale. The nine facets are Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards (performance based rewards), Operating Procedures (required rules and procedures), Coworkers, Nature of Work, and Communication (Spector, 1994).

**Keirsey Temperament Sorter ® II.** David Keirsey developed the measurement tool that refers to a self-assessed 70 question personality instrument. The Keirsey model identifies four dichotomous pairs of preferences as the basis of the four dominant temperament types (Keirsey & Bates, 1984).

**Myers-Briggs Type Indicator (MBTI).** Katharine Cook Briggs and Isabel Briggs Myers developed the measurement tool that is a self-report questionnaire. The assessment is a result of the initial work of C. G. Jung's theory of personality and designed to make Jung's theory understandable and practical for everyday use (Myers & Myers, 1995).

**Nature of work.** A job satisfaction facet that refers to the degree of satisfaction one performs assigned job responsibilities (Spector, 2007).

**Operating conditions.** A job satisfaction facet that refers to the overriding rules, policies, procedures, and workload found in the workplace (Spector, 2007).

**Promotion.** A job satisfaction facet referred to as an opportunity to advance in a career is a job satisfaction facet that is found in the workplace (Spector, 2007).

**Supervision.** The term is a job satisfaction facet that refers to style of task-oriented behavior or person-oriented behavior in a supervisory position. Task oriented supervision includes achieving organizational goals through the supervisory style, giving direction and coordinating group activities. Person-oriented supervision behaviors employ attributes of trust, respect, support, collaborative relationships, transparency, and needs to improve the work environment (Lester & Bishop, 2000).

**Temperament.** An archetype referred to as observable personality traits which include communication habits, patterns of behaviors, and sets of values, talents, and attitudes (Keirse, 1998).

**Two-Factor theory.** The motivation theory developed by Fredrick Herzberg is based on the question “What do people want from their job?” The theory explains that while hygiene factors are essential to the employee, job satisfaction is not determined by the presence of the hygiene factors. Hygiene factors consist of salary, organization policies, interpersonal relations, physical working conditions, and supervision. According to the theory, employees experience job dissatisfaction when these deteriorate. Factors that lead to positive job satisfaction are referred to as “motivators”

which serve to increase job satisfaction and improve employee performance (Herzberg et al., 2002).

**Working conditions.** The job satisfaction facet refers to physical surroundings in the work place. In school settings, conditions include the school environment: physical facilities, a safe, pleasant, supportive climate, and culture with adequate compensation (National Center for Education Statistics, 1996).

**Years of Service.** The term refers to the number of years an employee works with the current employer (Jennings, 1999).

### **Overview of the Methodology**

The population for this study consisted of Doctor of Educational Leadership candidates and graduates from nine cohorts. Two measurement methods used in the study included the JSS and KTS®-II. Data were collected from The JSS for cohorts one through nine beginning in 2014. Participants responded to the online questionnaire. Hypotheses were tested to determine if any significant relationship exists between the candidates or graduate's job satisfaction, temperament traits, job role, and years of service. The study was limited to the number of candidates and graduates enrolled in the nine cohorts.

### **Organization of the Study**

The first chapter includes the background of the study, the problem statement, the significance of the study to the field of education, an overview of the methodology, and the delimitations and definitions of the study. Chapter two provides a review of the literature concerning job satisfaction, chapter three explains the quantitative methodology of the study including the general perspective, research framework, population sample,

instruments used, procedures for collection and analysis of the data, as well as methods for ensuring the reliability of the study. The results and hypothesis testing are explained in chapter four. Summaries and findings are discussed in chapter five along with the explanation of the purpose statement and research questions, review of methodology conclusions, and suggestions for future research.

## **Chapter Two**

### **Review of Literature**

The review of literature for this study contains information on temperament theory, job satisfaction, job role, and years of service. The topics are presented in three sections. An overview of temperament traits and theories are discussed in the first section. Temperament has been described by Rothbart and Derryberry (2000) as “constitutionally based individual differences in emotional and attentional reactivity, and self-regulation, which is influenced over time by heredity and experience” (p. 4). An overview of job satisfaction is provided in the second section. An overview of job roles and years of service is the focus in the third section.

#### **Overview of Temperament Traits**

A rich history of research studies investigating temperament theories have added to the knowledge base (Keirsey, 1998). The earliest research related to temperament studies is rooted in ancient times around 370 BCE and continued to be of interest during the Middle Ages in Europe (Keirsey, 1998). Temperament studies experienced renewed popularity during the nineteenth and early 20<sup>th</sup> century in the United States (Keirsey, 1998). During the 20<sup>th</sup> century, Carl Jung investigated temperament types associated with introversion and extroversion (Keirsey, 1998). During the mid-20<sup>th</sup> century, temperament theories emerged based on Jung’s idea that people’s tendencies are related to how individuals interact with the environment. Katharine Cook Briggs, Isabel Briggs Myers, and David Keirsey extended Jung’s theory and developed typology measurement instruments that may be used by employers in the workplace and in educational settings for academic advancement (Quenk, 2009).

## Overview of Temperament Theory

Interest in the idea that people are born with particular traits causing certain actions to occur dates back to around 370 BCE when Hippocrates identified four major temperaments referred to as choleric, phlegmatic, melancholic, and sanguine (Keirse, 1998). Roman physician, Galen further expanded the writings of Hippocrates by linking the four temperaments to the balance of body fluids in 190 BCE (Keirse, 1998). Paracelsus identified nymphs, sylphs, gnomes, and salamanders as four spirits that influenced human temperament in the 1540 publication *Nymphs, Sylphs, Gnomes, and Salamanders* (Keirse, 1998). The ancient temperament theories remained prominent in medicine, philosophy and literature until the early 20<sup>th</sup> century (Keirse, 1998).

The United States experienced a renewed interest in temperament theories during the early 19<sup>th</sup> century and into the 20<sup>th</sup> century when several historical events occurred, altering the way researchers examined motives for human behavior. Beginning in the early nineteenth century temperament studies focused on two opposing beliefs. One belief focused on people's behavior related to specific group affiliations based on race, religion, political party, and gender (Winter & Barenbaum, 1999). The second belief focused on persons as individuals with unique characteristics (Winter & Barenbaum, 1999). Additionally, in an effort to understand temperament differences, research focused on measures used to assess intelligence (Winter & Barenbaum, 1999). Furthermore, with the onset of World War I, diagnostic testing was developed to measure military personnel stability because of susceptibility to stress brought on by combat conditions.

Temperament studies also regained popularity during the early 20th century through research conducted by Carl Jung. During the 1950s, a temperament theory emerged based on Jung's idea that people's tendencies are related to how individuals interact with the environment. Katharine Briggs and Isabel Briggs Myers proposed that human behavior is the logical result of observable differences in mental functioning (Myers & Myers, 1995). A temperament theory, which evolved during the mid-20th century, was developed by David Keirsey. The temperament theory was based largely on personal observations and differed from Myers's concept on a broad set of premises.

**Carl Jung's temperament type theory.** Carl Jung, a Swiss physician most recognized for developing analytical psychology, contributed significantly to understanding temperament during the 1920s. In a time when some investigators thought that, individuals were essentially very similar in having a single basic motive. Jung (1923) believed individuals were different because of many internal instinctual attitudes. Jung (1923) theorized some people are oriented to an external world and are extroverted in nature while other individuals prefer an internal world, and are naturally introverted. Besides observing extrovert and introvert behaviors, Jung examined a person's engagement in mental activities while in their preferred world of extroversion or introversion.

**Introversion and extroversion.** While Jung popularized the terms extroversion and introversion that identify certain behaviors, recent studies on the topic have suggested there is no clear definition of introversion or extroversion (Cain, 2013). For example, trait psychology adhering to the Big Five theory defines introversion as lacking assertiveness and sociability traits (Cain, 2013). According to Cain (2013),



“Kagan’s research on high reactivity and anxiety, Aaron’s work on sensory processing sensitivity, and its relationship to conscientiousness, intense feeling, inter-directedness, and depth of processing” adds to a broad definition of introversion and extroversion (p. 270).

Although recent theorists may differ on the accuracy of Jung’s ideas related to introversion and extroversion, many agree on several key points, which include the way both temperament types differ in the degree of outside stimulation required to function adequately (Cain, 2013). One point of agreement is recognizing different work habits of introverts and extroverts. For example, extroverts may tend to undertake job assignments quickly, make decisions with urgency, take risks, and are comfortable multi-tasking (Cain, 2013). Furthermore, extroverts tend to enjoy the process and work for monetary and status rewards. Introverts tend to work more deliberately and at a slower pace. At work, introverts concentrate deeply, performing one task at a time, and are not driven by wealth and fame (Cain, 2013).

Social style is a second key point. Modern theorists agree that extroverts are generally more assertive, dominant, and need companionship. Further, extroverts also spontaneously think aloud, preferring talking to listening and are contented with conflict but not with seclusion (Cain, 2013). Introverts on the other hand, prefer the companionship of close friends, colleagues, and family. In social gatherings, introverts listen more than speak, think before verbalizing thoughts, enjoy deep discussions, and tend to dislike conflict (Cain, 2013).

A leadership quality is the final key point. Leadership qualities among extroverts and introverts have been examined in recent studies (Cain, 2013; Grant,

Gino, & Hofmann, 2011). Studies have reported that 96% of managers and executives exhibit extrovert tendencies although some research has suggested that introverted leaders may be better supervisors (Grant et al., 2011). While extroverted persons are dominant and friendly, considered preferential in hiring and promotion decisions, and perceived to be more productive by supervisors and administrators, introverted supervisors in some situations may be more valuable (Grant et al., 2011). For example, a 2001 study examined eleven successful organizations to determine their greatness and found organization leaders were described by colleagues as humble, reserved, introverted, and mild-mannered (Cain, 2013). Additional studies conducted to determine organization success found that when introverted leaders worked with people who were proactive, work production increased (Grant et al., 2011). The researchers determined introverted leaders are more effective at leading initiative-takers and extroverted supervisors are successful with passive workers (Grant et al., 2011).

Jung labeled the mental activities as functions or cognitive processes and separated the functions into two main groupings referred to as perception and judgment (Berens, 1999). Perception is the cognitive process which is the means used by people to gather information. Jung identified two kinds of perception that are referred to as sensation and intuition. Sensing is a cognitive process, which creates an awareness of concrete information while intuition is a responsiveness of abstract ideas. Judgment is the second cognitive process. According to Berens (1999), judgment refers to a process of organizing, evaluating, and drawing conclusions (p. 3). Two kinds of judgment identified by Jung include thinking and feeling which occur when people evaluate criteria and values. Thinking judgments, according to Berens (1999), are evaluations based on

objective criteria while feeling judgments are founded on personal, interpersonal, or universal values (p. 3).

**Katharine Briggs and Isabel Briggs Myers.** During the 1940s and 1950s, a temperament theory developed by Briggs and Myers emerged based on Jung's idea that suggested people's tendencies are related to how individuals interact with the environment (Myers & Myers, 1995). Using careful observations of individual behavior, Briggs and Myers proposed that human behavior is the logical result of observable differences in mental functioning and concluded that an assessment of the temperament differences could provide a practical benefit to people's lives (Myers & Myers, 1995; Quenk, 2009). Additionally, Briggs and Briggs-Myers observed that many people during World War II were working on tasks that were incompatible with their abilities (Kroeger & Thuesen, 1992). Based on their observations and the war effort, the researchers were determined to design a psychological instrument that would explain in practical terms, Jung's theory of personality preferences (Kroeger & Thuesen, 1992). Specifically, Myers was motivated to develop an instrument that would allow people to assess their natural preferences. Briggs and Briggs-Myers developed the Myers-Briggs Type Indicator (MBTI) as a tool to give people information about their psychological type preferences (Andrews & Haythornthwaite, 2007).

In 1956, the Educational Testing Service published the MBTI as a research instrument that can be applied and examined for empirical evidence (O'Brian, Bernold, & Akroyd, 1998). Use of the MBTI may be found in various settings including education. While the use of the instrument has experienced a relatively long history in education, widespread support for the MBTI has taken considerable time. During the 1960s, the

MBTI was used in educational research to examine the relationship between teaching styles among best teachers and material presentation to students (Andrews & Haythornthwaite, 2007). According to Andrews and Haythornthwaite (2007), additional research compared the MBTI to other personality measurement tools “in the role of predicting successful learning styles and grade point average” (p. 336). Toward the 1990s, the validity and reliability of the MBTI as a predictor for student success in educational settings was widely accepted in a large body of research (Andrews & Haythornthwaite, 2007). Various forms of the MBTI currently exist and are available to the general public and professional users (Quenk, 2009). The Briggs and Myers four distinct dichotomous preferences are

1. Preferred World- Introversion (I) or Extroversion (E)
2. Gather information-Sensing (S) or Intuition (N)
3. Decision making- Thinking (T) or Feeling (F)
4. Orientation toward the world- Judging (J) or Perceiving (P)

Briggs-Myers referred to extraversion (E) or introversion (I) as a person’s preference for interacting with the world around them. Extroverts (E) prefer the external world; draw their energy from interacting with the environment, and focus perception and judgment on people and objects (McCaulley, 1985). Introvert (I) types reflect a person’s preference to nurture and protect the inner world with a tendency to focus perception and judgment on principles and ideas (McCaulley, 1985).

Processes for perceiving information include sensing (S) or intuition (N). Persons perceiving information with sensing (S) tendencies use the five senses to understand physical reality, enjoy viewing the practical use of possessions, and recognize significant

information. Intuitive (N) types internalize information through impressions and patterns while being more open to future possibilities (McCaulley, 1985).

Thinking (T) or feeling (F) describes actions of judgment and identifies a person's preference for making decisions. Thinking (T) types show a preference to make decisions using objective principles and impersonal facts. Feeling (F) types are inclined to consider individual concerns and the people involved during the decision making process (McCaulley, Myers, Quenk, & Hammer, 1998).

The fourth and final preference pair is the style of dealing with the external world, which is shown by judgment (J) or perceiving (P). Judgment involves the ways a person draws conclusions based on what has been perceived (McCaulley, 1985). Additionally, judging type behaviors may prefer a more structured and systematic lifestyle as opposed to perceiving type behaviors. Perceiving types may be inclined to prefer a more flexible and adaptable lifestyle (McCaulley, 1985).

Although one of the most popular tools to use in researching personality types, Tucker and Gillespie (1993) suggested the MBTI has several drawbacks (p. 650). The personality type inventory is considered by some to be a cumbersome and lengthy instrument for use in research settings (DeSouza, 2009; Tucker & Gillespie, 1993). Additionally, the MBTI requires professional credentials such as evidence of licensure, advanced degrees, or certification to purchase, and may be costly (DeSouza, 2009).

**Keirsey temperament theory.** As the mid-twentieth century approached, David Keirsey reexamined Jung's and Briggs-Myers personality-type theories and constructed a temperament theory based largely on personal observations. Furthermore, Keirsey viewed temperament as a "configuration of inclinations...the inborn form of human

nature” (p. 20). The researcher believed temperament is a standard of observable personality traits that include communication habits, patterns of behaviors, and a set of values, aptitudes, and feelings (Keirsey, 1998). According to Keirsey and Bates (1984), an individual’s temperament is “that, which places a signature or thumbprint on one’s actions, making it recognizably one’s own” (p. 27).

Keirsey (1998) described the temperament groups as four “intelligence types and their skilled action roles” (p. 341). Troubleshooters (SPs), Stabilizers (SJJs), Analyst (NTs), and Seekers (NFs) are labeled as the four basic temperament groups, which describe human behavior (Keirsey, 1998). Additionally, Keirsey identified four function and attitude clusters as sensing-judging, sensing-perceiving, intuition-thinking, and intuition-feeling.

1. Sensing (S) and Intuiting (N) examine the focus of an individual’s attention (Neal & Neal, 2009).

2. Thinking (T) and Feeling (F) define how people behave toward other human beings. Intellect has control over the thinking temperament while those who are led by passion are typed as feeling (Neal & Neal, 2009).

3. Judging (J) and Perceiving (P) are temperaments describing decision making. These temperament types identify how an individual decides to organize their lives. Judging temperaments are inclined to make rapid decisions and most likely prefer order and schedules. Perceiving types are led by flexibility, prefer to have several options, and tend to procrastinate.

4. Extroversion (E) and Introversion (I) address social attitude (Keirsey, 1998). People who thrive on energy from social interaction with others and are inclined toward

the outer world may be considered Extroversion (E) typed (Neal & Neal, 2009). People who are quiet, reserved, and energized toward the inner world are categorized as Introversion (I) typed (Keirsey, 1998; Neal & Neal, 2009).

**Troubleshooter (SP).** A Troubleshooter temperament type tends to typically excels in the arts including fine arts, performing arts, and industrial arts. Troubleshooter's make up 32-40 percent of the general population (Keirsey, 1998). The Troubleshooter's sensing function and perceptive attitude are identified as role variants. These individuals are often described as (S) observant and (P) probing.

The Troubleshooter Crafter temperament type tends to communicate through actions rather than words. Crafters thrive on excitement, particularly in fast motion, behave impulsively, and demonstrate spontaneous actions (Keirsey, 1998). Approximately six percent of the population is made up of Troubleshooter Crafters (Keirsey, 1998).

The Troubleshooter Composer temperament type tends to do extremely well in the fine arts (Keirsey, 1998). Troubleshooter Composers are commonly gifted in painting, sculpting, choreographing, film directing, and composing songs (Keirsey, 1998). Sometimes Troubleshooter Composers are misunderstood because of their quiet disposition and tentativeness to make their thoughts known. Troubleshooter Composers make up about nine to ten percent of the population (Keirsey, 1998).

The Troubleshooter Performer temperament type tends to make up approximately five percent of the population (Keirsey & Bates, 1984). Troubleshooter Performers are playful, fun loving, and often capable of using their outgoing respectable wit to boost the spirit of others in their present company. Troubleshooter Performers enjoy learning

about arts and crafts, focus on the moment, and bestow cheerfulness upon others (Keirse, 1998).

Troubleshooter Promoter temperament types tend to broadcast activities and are skilled at maneuvering others in a particular way to get their needs met (Keirse, 1998). Considered very social and likeable, Troubleshooter Promoters are usually recognized for completing assigned tasks. Many Troubleshooter Promoters are risk-takers and have an optimistic outlook toward life. Troubleshooter Promoter temperament types enjoy new challenges and make up approximately 10 percent of the population (Keirse, 1998).

**Stabilizer (SJ).** A Stabilizer temperament type tends to preserve and serve society's most important institutions. The four skilled roles of the Stabilizer are Inspector, Protector, Provider, and Supervisor. Stabilizers are labeled with the sensing (S) function and judging (J) attitude. They tend to behave as vital persons of society. Considered hard workers, dependable, practical, and down to earth, Stabilizers trust authority, strongly adhere to customs, and believe in traditions (Keirse, 1998). Approximately 46 percent of the population is considered Stabilizer temperament type (Keirse, 1998).

The Stabilizer Inspectors temperament type tends to communicate about the here and now as well as current conditions. Characterized by decisiveness in practical matters and extremely dependable, Stabilizer Inspectors communicate in simple terms. Making up approximately ten percent of the population, Stabilizer Inspectors keep their work environment neat, orderly, and ordinary rather than luxurious (Keirse, 1998). At work, Stabilizer Inspectors are comfortable when employees know their assigned duties, follow the rules, and operate within the organization's guidelines.



The Stabilizer Protector temperament type tends to make up approximately 10 percent of the general population (Keirsey, 1998). Stabilizer Protectors are interested in learning about finance and focus heavily on morality. Considered fatalistic and pessimistic by nature, Stabilizer Protectors guard others against life's difficulties and obstacles. Often observed as shy around strangers, Stabilizer Protectors can be mistaken as cold and non-flexible when in reality, are quite warm-hearted and caring (Keirsey, 1998).

The Stabilizer Provider temperament type tends to serve others, making sure individual needs is met. Stabilizer Providers are considered the most sociable of all Stabilizers. Stabilizer Providers types are concrete communicators and cooperative in implementing their goals (Keirsey, 1998). Representing more than 10 percent of the population, Stabilizer Providers make excellent chairpersons in charge of charitable and fundraising organizations (Keirsey, 1998). These individuals are personable, enjoy teamwork, and work endlessly at attending to details related to goods and services.

The Stabilizer Supervisor temperament type tends to make up at least ten percent of the population (Keirsey, 1998). Often identified as the pillars of their community, Stabilizer Supervisors are sociable and civic minded. Cooperative by nature, Stabilizer Supervisors may rise to the position of leadership in various organizations of affiliation, enjoy taking charge of the group, and prefer to give orders.

**Seeker (NF).** The third pair of preferences Keirsey (1998) described is Seeker. Seeker temperament demonstrates “intuitive behaviors and feeling attitude” (p. 125). Seeker temperament referred to, as NFs are naturally inductive in their thought and speech with a tendency to be interpretive (Keirsey, 1998). Seekers strive to understand

who they are, focusing on self-improvement in order to be their best possible self (Miao, 2009). Concern for personal growth, the Seeker's imagination is propelled by the quest for self-knowledge and personal improvement (Miao, 2009). Seekers frequently choose to work in careers in education, counseling, social work, personnel work, journalism, and the ministry because of their desire to help others achieve their potential. Fifteen percent of the population is Seekers (Keirse, 1998).

The Seeker Champion temperament type tends to be likeable and others find themselves to be at ease in their presence. Making up approximately two to five percent of the population, Seeker Champions are distinctly aware of what is occurring with people in their presence (Keirse, 1998). Often selecting Liberal Arts as a college major, career choices for Seeker Champions include the communicative arts, teaching, and the ministry.

The Seeker Counselors temperament type tends to represent one to two percent of the population. Seeker Counselors types are sometimes considered difficult to get to know and very private, sensitive people. Not typically visible leaders, Seeker Counselors work intensely with those close to them, quietly providing encouragement behind the scenes (Keirse, 1998). Career choices often include the ministry, teaching, general practice medicine, and therapeutic counseling.

The Seeker Healer temperament type tends to be adaptable, embrace new ideas and information, is uniquely aware of people's feelings, and relate well to others in a somewhat reserved manner. Seeker Healers choose to work in the ministry, missionary work, social work, library research, college teaching in the humanities, and child

counseling (Keirse, 1998). Approximately two percent of the population is Seeker Healer (Keirse, 1998).

Seeker Teacher temperament types tend to be abstract in communicating and cooperative in implementing goals (Keirse, 1998). Seeker Teachers trust intuition, value recognition, consider people their highest priority, and aim for the wisdom of a scholar. Often found in professions tied to the media and ministry, Seeker Teachers are often therapists, educators, and primary care physicians. Language is a virtue that permits Seeker Teachers to contribute to an unusual level when dealing with humankind. Seeker Teachers make up approximately five percent of the general population (Keirse, 1998).

**Analyst (NT).** Analyst temperament types are characterized as preferring intuitive behaviors and thinking attitude. Inclined to be thinkers, Analyst are drawn to complex problem-solving systems and enjoy strategic analysis in order to understand how they work (Miao, 2009). The four Analyst skilled roles are Field marshal, Mastermind, Inventor and Architect. Five to seven percent of the general population is considered Analyst (Neal & Neal, 2009).

The Analyst Architect temperament type tends to pay attention to systems, generally seeks to study science, and is preoccupied with technology (Keirse, 1998). Pragmatic and skeptical in their point of view, Analyst Architects center their attention on spatial intersections and intervals of time (Keirse, 1998). Making up approximately one percent of the population, Analyst Architects are quiet, reserved, and value intelligence in themselves and others (Keirse, 1998).

The Analyst Field marshal temperament type tends to be characteristically described as leaders of leaders. Making up less than two percent of the population, this temperament type is abstract in communication and utilitarian in how goals are implemented (Keirse, 1998). Showing signs of possessing the ability at systemizing, prioritizing, generalizing, summarizing, compiling evidence, Analyst Fieldmarshals begin communicating their ideas at an early age (Keirse, 1998).

The Analyst Inventor temperament type tends to be considered the most inventive of all Analysts. Curious in nature, Analyst Inventors can be inspiring to others. As teachers, Analysts are superior, always devising new and intriguing ways to engage students in learning. These individuals make good leaders on projects that test their inventiveness. Regardless of their career choice, Analyst Inventors are rarely conformists in the work place and are viewed as easy going rarely demonstrating critical or negative tendencies (Keirse, 1998).

Analyst Mastermind temperament types tend to be described as a contingency planner. They are capable of understanding how the necessary progression of steps is required to accomplish the overall project. Analyst Masterminds often choose to study science, focus on technology, and work well with systems (Keirse, 1998). Analyst Masterminds can be found in careers where theoretical models can be translated into actuality, typically constructing data and human systems wherever they are employed, if provided the opportunity. Analyst Masterminds tend to drive others as they drive themselves; can be viewed by others as demanding, and difficult to satisfy in a job situation. Furthermore, Analyst Mastermind types tend to makeup approximately one percent of the general population (Keirse, 1998).

Temperament and character theory have been studied for over 2000 years beginning with the ancient Greek and Roman philosophers and physicians. Evidence for the desire to categorize personality types has been recorded in publications and referenced in many studies throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries. The work of Jung, Myers and Briggs, and Keirsey have contributed to a large body of research to the education and industrial community examining the relationship between temperament types and human interaction through communication, actions, and attitudes.

**The Keirsey Temperament Sorter®-II.** The Keirsey Temperament Sorter®-II (KTS®-II) published in *Please Understand Me® and Please Understand Me II* is an instrument developed to measure the various temperament types. The popular personality instrument currently in use consists of 70 questions and is based on Keirsey Temperament theory designed to help individuals determine their temperament type.

Business organizations and educational institutions use the KTS®-II and may find several benefits (Travis & Ryan, 1988). Industry and education may recognize that when employees and students are aware of their individual temperament types, work productivity increases (Travis, & Ryan, 1988). Second, coworker relationships may improve and students may readily accept their learning styles (Travis, & Ryan, 1988).. Finally, employers can capitalize on individual creativity in the workplace and educators may provide increased opportunities for self-motivated learning (Travis, & Ryan, 1988).

Temperament for educational leaders may be categorized by the KTS®-II as ENFJs identified as Teachers (Keirsey, 1998). Keirsey suggested Teachers are “personally committed to the task of educating others, literally “leading out” the best that is in others, by broadening, edifying, enlightening, illuminating, improving, and refining

the attitudes and actions of their learners” (p. 313). Keirse (1998) further suggested these educators are “rare in the workplace” (p. 313). Some evidence from studies indicate that executive-level leaders are most likely to be more intuitive and line-level managers more sensing (Welch, 2002). Studies conducted in the 1990s found the higher managers progress through an organization, the more likely their temperament type is intuitive (Welch, 2002).

Research studies utilizing the KTS®-II may be found in various educational settings. For example, Stokes (2001) used the KTS®-II to study undergraduate students enrolled in courses that involved Web-based modules to assess their satisfaction with learning in a digital instructional environment. Temperament categories determined by the KTS®-II included guardian, artisan, idealist, and rational. Satisfaction was measured on a 16-item satisfaction scale. Considered important from the research findings is the absence of temperament as a predictor of satisfaction, with the view that people considering enrolling in digital learning courses but demonstrate reluctance to register because of perceived mismatches between personal traits and digital environment, should be reassured that the environment is not restrictive in terms of temperament (Stokes, 2001)

Similarly, a study designed to determine if different personality types express more or less satisfaction with courses delivered online compared to those delivered in the classroom was conducted by Daughenbaugh, Ensminger, Frederick, & Surry (2002). The methodology utilized descriptive and inferential statistics with the KTS®-II and a course satisfaction instrument. The researchers identified 146 college students enrolled in online and in-class courses in the College of Education at a university (Daughenbaugh et al.,

2002). The four hypotheses were that Introvert, Intuition, Thinking, and Perceiving personalities demonstrate greater satisfaction than Extrovert, Sensing, Feeling, and Judging personalities. Results indicated there were two statistically significant differences between the Extroverts and Introverts among the 10 course satisfaction factors (Daughenbaugh et al., 2002). The two groups differed on their satisfaction in the evaluation method and in preference for the way information was presented in the courses (Daughenbaugh et al., 2002).

Kelly and Jogovic (2001) utilized the KTS®-II and the MBTI to determine concurrent validity for the online version of the KTS®-II. Concurrent measures were attained with 203 first-semester freshman without declared majors. Results indicated there were strong positive correlations between the concurrent MBTI and KTS®-II measures of psychological type (Kelly & Jugovic, 2001). The researchers suggested that the relevance of the findings could be used for career counselors' use of the online assessment.

### **Overview of Job Satisfaction**

In times when educational organizations are seeking to create positive working environments for establishing sustainable and successful work places, understanding employee job satisfaction is crucial. Studies in job satisfaction and work motivational theories are of interest to many employers and researchers who seek to determine the affect these factors have on job role and length of years among school leaders in the education profession. Interest in studying job satisfaction has produced an expansive body of knowledge and considered one of the most widely researched concepts in industrial and organizational psychology (Locke, 1976; Spector, 1997). The expansive

amount of job satisfaction research has been associated with work related facets that may include motivation, productivity, and general life satisfaction (Landy, 1978). Job satisfaction is considered an important statistical predictor and often the primary variable in organizational makeup and theory research studies (Bolger, 2001; Judge & Klinger, 2008; Spector, 1997).

Definitions for job satisfaction may be found in all aspects of organizational research (Spector, 1997). Edwin A. Locke, American psychologist and a pioneer in goal-setting theory provided a popular definition for job satisfaction found in modern literature. Locke (1976) suggested job satisfaction is “a pleasurable or positive emotional state resulting from the appraisal of one’s job or experiences” (p.1304). Offering a more current perspective, Spector (1997) defined job satisfaction as how “satisfied or dissatisfied a person feels about a job or different aspects of a job” (p. 2). An additional definition of job satisfaction from an educator’s perspective is defined as the degree an instructor perceives and values various factors as evaluation, collegiality, responsibility, and recognition (Lester, 1987).

Researchers and theorists who have contributed to the body of knowledge on job satisfaction include, Elton Mayo, Fredrick Taylor, Paul Spector, and Timothy Judge. Motivational theories related to job satisfaction were developed by Abraham Maslow and Fredrick Herzberg. Hierarchies of Needs and Two-Factor Theory have been referenced in modern job satisfaction studies.

**History of job satisfaction.** For over six decades, job satisfaction has been studied in industrial and educational settings by Fredrick Taylor, Elton Mayo, Paul Spector, and Timothy Judge (Lester, 1987). Job satisfaction is considered the most



frequently studied variable in organizational behavior research and has experienced a rich and varied history (Spector, 1997). Studies designed to study the nature and causes of job satisfaction began in the 1930s although examining attitudes of workers in the job situation can be traced back to Fredrick Taylor's principles of scientific management theory conducted during the early 20<sup>th</sup> century. In 1933, Elton Mayo published *The Human Problems of an Industrial Civilization*, which provided insight into the Hawthorne experiments that were conducted within the Chicago, Illinois Hawthorne plant. Timothy Judge, a more recent, well known theorist studied job satisfaction and has contributed to a large body of dispositional research. Paul Spector (1985) developed the Job Satisfaction Survey during the last half of the 20<sup>th</sup> century that was designed to measure the major aspects of job satisfaction in human services as well as public and non-profit sector organizations (p. 694).

**Fredrick Winslow Taylor.** Beginning as early as 1911, business managers studied the effect job satisfaction had on the level of employee work production. Fredrick Winslow Taylor's book entitled, *Principles of Scientific Management* contributed to the change in manufacturing philosophies and the methods job assignments were performed by employees (Taylor, 1911). Scientific management was a method designed to structure jobs, and was based on the premise that economic factors were the catalyst that motivated workers. This idea improved job productivity and transformed the workplace from skilled labor to assembly line jobs. According to Locke (1976), Taylor believed employees who "accepted the scientific management philosophy" and received the highest possible wages with the least amount of exhaustion were satisfied with work (p. 1298).

**Elton Mayo.** Research linking occupation and job satisfaction in industrial settings continued to be studied during the 1920s and 1930s. The Hawthorne studies conducted by Elton Mayo in the 1930s developed experiments to determine the relationship between different working conditions, morale, and production. According to (Borkowski, 2011), these experiments led researchers to discover that many factors increased work productivity and results from findings contributed to job satisfaction research. Conclusions drawn from the findings suggested employees were motivated to work for reasons other than monetary benefits and were consistent with Taylor's observations in the early 1900s (Borkowski, 2011).

Based on the Hawthorne studies during the 1930s, industry began to examine employee motivation and factors that affected job satisfaction during the 1940s and 1950s. Industry has used motivation to increase job satisfaction among employees for many decades. Two theorists widely cited in large bodies of motivational research are Abraham Maslow and Fredrick Herzberg (Gawel, 1997). Maslow developed the Hierarchy of Needs theory, which is based on satisfying different human needs at various levels (Gawel, 1997). Additionally, Maslow explained how people engage in satisfying these needs ranging from the most basic to the highest level. Using the work of Maslow, Fredrick Herzberg developed a theory about job factors that motivate people. The Two-Factor theory identifies factors affecting people's attitudes about work and was developed on the premise that job satisfaction occurs when employees are motivated to grow, achieve, and advance in an organization (Gawel, 1997; Herzberg et al., 2002).

**Abraham Maslow.** Maslow developed the Hierarchy of Needs theory based on the belief that people have an innate desire to satisfy a given set of needs (Maslow, 1970).

The theory is often represented by a pyramid identifying the lower level needs at the base of the pyramid and self-actualization needs at the peak (Fisher, Frey, & Pumpian, 2012). Specifically, Hierarchy of Needs theory distinguishes five fundamental desires, which include physiological, safety, association, esteem, and self-actualization. Some of the biological and physiological needs consist of food, water, and oxygen, which, must be satisfied before safety, needs become prominent. Biological and physiological needs are found at the lowest order of the pyramid.

Safety needs consist of protection, security, and stability (Maslow, 1970).

Moving towards the highest order, safety needs are the second step of the hierarchal model (Maslow, 1970). According to the theory, as physiological and safety needs are satisfied, the need for belonging is met through affiliation with people or organizations (Maslow, 1970). Belongingness and love needs are located at the third step (Maslow, 1970). Once the first three categories of needs are met, the next dominant need to be satisfied is esteem, which is achieved when a person feels a sense of self-respect and is valued by others (Maslow, 1970). The esteem needs are located at the fourth step on the pyramid (Maslow, 1970). At the highest level on the Hierarchy of Needs is self-actualization (Maslow, 1970). Self-actualization is described, as the need to fulfill one's potential in life (Simons, Irwin, & Drinnien, 1987). Psychological and self-fulfillment needs are described as growth needs, which include self-sufficiency, individuality, goodness, and truth (Goble, 1970).

Maslow's original theory was highly criticized for its lack of research findings to support motivation theories (Gawel, 1997). Despite criticism, the theory is widely cited in industrial research although researchers during the 1980s questioned its applicability in

education although this idea met with some resistance (Kroth, 2007). Kroth (2007) argued, “The model helps educational leaders understand how to create workplace conditions required for satisfying employee needs” (p. 8). As leaders seek to find ways of meeting the physiological, psychological, and growth needs of faculties, working conditions will improve. Placing faculty in appropriate job roles where individual needs are satisfied may contribute to the success and productivity of the organization and increase the length of years with the organization (Goble, 1970).

**Fredrick Herzberg.** Fredrick Herzberg used Maslow’s needs hierarchy to develop the Two-Factor theory. The motivation theory is based on the phenomenon that job satisfaction is achieved when employee motivational needs are satisfied. Motivators include achievements, recognition; work itself, responsibility, promotion, and growth opportunity (Herzberg, et al., 2002). Factors, which lead to job satisfaction, are different from those that create dissatisfaction. Factors found in the work environment that may cause job dissatisfaction are known as hygiene factors.

Hygiene factors are identified as company policy and administration, supervision, colleague relationships, working conditions, compensation, status, and job security (Herzberg, et al., 2002). While hygiene factors are not direct motivators, they are starting points to motivation. Further, hygiene factors are necessary to maintain a reasonable level of satisfaction although they may also contribute to job dissatisfaction (Darty-Baah, & Amoako, 2011; Herzberg, et al., 2002).

Findings from the Herzberg et al., (2002) study showed that employees described satisfying experiences in terms of intrinsic motivators. Herzberg proposed that eliminating the causes of dissatisfaction would not create a feeling of satisfaction rather;

the use of motivators would produce fulfillment (Herzberg, et al., 2002; Ramlall, 2004). Results showed the absence of these factors did not highly impact job dissatisfaction but when present, the factors create high levels of motivation and increase work performance (Herzberg, et al., 2002). These findings provided clear implications for the workplace. With basic changes in the nature of an employee's job through work enrichment, motivation can be increased. For example, Ramlall (2004) suggested employers should consider redesigning jobs to allow for "increased challenge and responsibility, opportunities for promotion, personal growth, and recognition" (p. 57).

**Paul Spector.** Because job satisfaction is a self-reported positive emotional attitude reflective of an employee's work or employment experiences, measuring profession fulfillment can be a challenging process (Locke, 1976). Although there are several types of instruments that have been used in the workplace to provide important data for employers, the most common measurement tool prescribed to determine an employee's overall level of job satisfaction is accomplished with existing questionnaire surveys. Additional types of instruments used to evaluate job satisfaction include interviews or questionnaires.

While there are many advantages to using an existing scale to measure satisfaction of employees, there is one major disadvantage. Spector (1997) submitted that using an existing survey is limited to only "those facets that the developers choose to place in their instrument" (p. 7). The researcher further explains that although most surveys tend to be more general, therefore more applicable for organizational use, specific issues related to certain organizations may not be assessed (Spector, 1997). Issues of concern according to Spector (1997) may include level of satisfaction with

decision making processes, job related activities, individuals, or policies (p. 7). Although several valid and reliable job satisfaction surveys are used among organizational researchers to study the topic, work fulfillment that has limited information is related to the human service employee.

During the 1970s, researchers found that norms from the Job Descriptive Index and Minnesota Satisfaction Questionnaire did not reflect human services; therefore, making comparisons between specific human service organizations to more general human service organizations difficult (Spector, 1985). In order to fill the need to measure human services, the Job Satisfaction Survey (JSS) was developed (Spector, 1985). According to Spector (1985), the purpose of the JSS instrument was to measure the major aspects of job satisfaction in human services as well as public and non-profit sector organizations (p. 694). Additionally, the instrument was normed and validated on human service personnel. The design of the JSS scale consists of 35 items and uses a summated rating scale format. Nine subscales of job satisfaction include pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication (Spector, 1997).

**Job satisfaction and temperament.** During times when organizations are seeking to establish a stable work environment and ensure job satisfaction among employees, it is important to understand how temperament influences the success for all stakeholders. Research on temperament and job satisfaction has experienced a diverse history resulting in conflicting conclusions over the last several decades. Many of the research studies investigating temperament types and job satisfaction have used different methods of research design and contradictory measurement strategies. For example, Ilies

and Judge (2002) conducted a study involving experience sampling methodology to examine the within relationship between mood and job satisfaction (p. 1119). Research conducted by Levin and Stokes (1989) involved a laboratory study, the Job Diagnostic Survey (JDS) and Job Descriptive Index (JDI) as well as the measure of Negative affectivity (NG) to examine the role of NG as a determinant of reported job satisfaction (p. 752).

Contrasting data analyses during the last century have also contributed to the inconsistent findings related to job satisfaction and temperament (Furnham, 1996; Judge, Bono, & Locke, 2000; Judge, Heller, & Mount, 2002; Judge, Heller, & Klinger, 2008; Judge, Rodell, Klinger, Simon, & Crawford, 2013; Keirsey, 1998; Spector, 1997). Judge (1993), a leading authority on disposition and job satisfaction suggested evidence linking personality variables to organizationally relevant attitudes and behavior have been somewhat disappointing (p. 388). For example, Judge, Parker, Colbert, Heller, and Ilies (2005) suggested that despite countless studies on job satisfaction, little effort to compare, contrast, and integrate dispositional measures have been implemented (p. 31), Judge and Larson (2001) argue otherwise. The researchers report that though this research is not without controversies, results indicate there is strong evidence that job satisfaction is partially dispositional based (p. 67) Judge (1993) reported similar findings indicating the overall data from multiple studies suggests that traits are somewhat significantly related to job satisfaction.

**Timothy Judge.** For over 20 years, Judge, well known theorist in the areas of temperament and job satisfaction, has contributed to a large body of dispositional research (Ostroff & Judge, 2007; Robbins & Judge, 2007). Some studies conducted by

Judge have examined dispositional sources of job satisfaction (Judge, Locke, & Durhan, 1997). To add to the body of knowledge related to dispositional sources of job satisfaction, Judge related three taxonomies referred to as positive and negative affectivity, the five-factor model, and core self-evaluations (Judge, et al., 2008). The overall data from multiple studies revealed that the traits from positive and negative affectivity, the five-factor model, and core self-evaluations were somewhat significantly related to job satisfaction. Further, findings showed when all three groups were examined concurrently; core self-evaluation typology was the only typology that was significantly related to job satisfaction (Judge & Hulin, 1993; Judge, Locke, Durham, & Kluger, 1998; Judge & Larsen, 2001; Judge, et al., 2008). Another variable Judge has addressed on motivational job satisfaction studies is role transition, and years of service, an employee is employed with an organization.

To understand the relationship between affective disposition, job satisfaction, role transition, and employee retention, Judge has contributed to a significant body of research (Judge, 1993; McNatt & Judge, 2008). In one study, Judge used empirical work from many years of research to study people's dispositions, job satisfaction, and predictability of leaving or staying with an organization. According to Judge (1993), findings from the study showed the "more positive the disposition of the individual, the stronger the relationship that was observed between job dissatisfaction and turnover" (p. 395). Additionally data revealed that people with positive dispositions toward life but dissatisfied with their jobs were employees that would likely leave the organization (Judge, 1993). In a more recent study, Judge used empirical research to examine the relationship between job attitudes, role transitions, and job commitment from recently



tenured employees (McNatt & Judge, 2008). The findings from data indicate that when superiors communicated with newly tenured employees in a role transition, job attitudes improved and the desire to leave the organization was reduced (McNatt & Judge, 2008).

Additionally, Watson and Slack (1993) conducted a study to examine the relationship between the two broad emotional traits with several aspects of job satisfaction (p. 161). The research involved respondents completing trait Positive Affect (PA) and Negative Affect (NA) scales. Heller, Judge, and Watson (2002) conducted a similar study, which involved a survey in a longitudinal test with multisource data. Additionally, three typologies were examined which are linked to job and life satisfaction: Big Five, positive and negative affectivity, and core self-evaluations (p. 815).

Watson & Hillison (1991) examined temperament type and job satisfaction of some agricultural education teachers. The researchers used descriptive research to study the relationships among temperament types and demographic variables. The MBTI and the Minnesota Satisfaction Questionnaire (Short form) was administered to 63 agricultural education teachers. Results from the study indicate that there is a relationship between personality temperament and job satisfaction (Watson & Hillison, 1991). Specifically, teachers of the sensing-perceiving (SP) temperament type revealed the lowest satisfaction scores of the Keirsey temperaments on extrinsic and overall satisfaction (Watson & Hillison, 1991).

### **Overview of Job Role**

A variable considered an important factor for understanding job satisfaction is a person's role in the workplace. The Organizational Role Theory (ORT) developed

during the 1960s, provided one approach to examining employee interactions in the workplace. Role theory is often used to evaluate different forms of a social system (Biddle, 1986). Roles in organizations are defined as characteristic behavior patterns (Biddle, 1986). Biddle (1986) explained that role is a presumption that persons are members of social positions (p. 67).

Job role was defined by Spector (1997) as the “required pattern of behavior for an individual in the organization” (p. 39). Positions and job titles may be associated with organizational roles but are not interchangeable. Empirical studies have been conducted to examine managerial roles of educational leaders identifying categories and types of roles each play in a school organization. For example, Rizzo, House, and Lirtzman (1970) measured role conflict and ambiguity utilizing a questionnaire (Rizzo et al., 1970). Results from the study indicated there was a correlation between organizational and managerial practices, and leader behavior with employee satisfaction. Results also indicated a correlation between organizational and managerial practices and with employee anxiety and inclination to leave the organization (Rizzo et al., 1970).

Bossert, Dwyer, Rowan, & Lee, (1982) conducted a review of scholarly literature to understand the instructional management role of a school administrator and student learning. School-level variables identified in the literature review and research were “instructional organization, school climate, influence behavior, and principal management” (p. 34). From the review of scholarly work, Bossert et al., (1982) developed a descriptive model of education leadership based on the results of a longitudinal case study in secondary education known as Far West model. The Far West model has been empirically validated in some American Studies, for example, Hallinger

and Heck (1996) used the model in the description of five conceptual models for discussing the relationship between leadership and achievement.

A myriad of research studies focus on the manager behaviors while other studies examine leader positions in the organization (Biddle, 1986; Mintzberg, 1973). Henry Mintzberg (1973) was a widely recognized researcher responsible for developing a set of ideas focused on managerial roles (p. 266). During the late 1960s, Mintzberg studied five managers to determine their job roles arguing that a managers characteristic behavior patterns may be defined by ten common sets of behaviors (Mintzberg, 1973). From the observations, it was concluded that managerial staff perform ten different, highly related sets of behaviors (Robbins & Judge, 2012).

Mintzberg divided the ten administrative roles into three categories identified as interpersonal, informational, and decisional (Welch, 2002). For each category, roles specific to the group were identified. Figurehead, leader, and liaison titles describe the interpersonal category. Interpersonal roles require managers to perform a number of routine duties related to legal and social matters. The roles also include taking responsibility for motivating and providing direction for employees. Three roles associated with informational groups are monitor, disseminator, and spokesman. Informational administrators are responsible for receiving and transmitting internal and external information to organizational members regarding organizational plans, policies, and actions. Entrepreneur, disturbance handler, resource allocator, and spokesman are identified with decisional roles. Roles in these job positions require managers to initiate new projects, take action to correct unexpected problems, allocate resources, and address bargaining issues (Robbins & Judge, 2012).

Fred Luthans, research expert in managerial work, studied job roles from a different perspective by observing 450 managers engaged in four supervisory activities as managers worked to achieve rapid promotions within the organization (Luthans, 1988). The roles included traditional management, communication, human resource management, and networking (Luthans, 1988; Robbins & Judge, 2012). Traditional management roles were defined as decision making and planning. Communication roles involved exchanging information and paperwork. Roles for human management executives were responsible for motivating, staff appraisals, dealing with conflicts, and training. Networking managers were responsible for social and business interactions. Results from the study showed managers who were most successful; in terms of rapid promotion engaged in networking roles (Robbins & Judge, 2012). Studies on a more global scale confirmed Luthans findings, which suggest there is a link between networking, social relationships, and success (Robbins & Judge, 2012).

While management roles imply positions that effectively and efficiently maintain operations in the organization (Bush, 2011), educational leadership roles may be described as persons who motivate and influence actions of others in order to succeed. Additionally, educational leadership roles might be identified as formal positions of authority or those who exercise leadership in an educational setting. Over the last several decades, school leadership theorists have studied roles that develop effective administrators, with research beginning in the early 1960s. One approach used to examine effective leadership roles in recent years is meta-analysis, which quantifiably summarizes and compares results from empirical studies (Card, 2012; Waters, Marzano, & McNulty, 2003).

Waters, Marzano, and McNulty (2003) employed meta-analysis to study leader roles and examine the knowledge, skill sets, strategies, resources, and tools required to increase student achievement. The researchers examined 70 studies from over 30 years to create a “balanced leadership framework” (Waters, Marzano, & McNulty, 2003).

Waters, Marzano, and McNulty (2003) reported the balanced leadership framework is founded on the premise that the effective leader’s role is to

understand how to balance push for change while protecting aspects of culture, values, and norms worth preserving, know which policies, practices, resources, and incentives to align and how to prioritize the alignment, monitor the increase in change then, seek and know how to mold their leadership strategies as a result, and value employees in the organization. (p. 2)

Effective leadership roles may also be identified from the Interstate School Leaders Licensure Consortium Standards (ISLLC). The standards provide a common vision for effective educational leadership (Canole & Young, 2013; Council of Chief State School Officers, 2008). The six standards consist of knowledge and understanding, dispositional beliefs based on values, and performance. Roles for educational leaders are generally defined by behaviors these persons must demonstrate in order to promote success in the organization. Roles include setting a shared vision, developing school culture, ensuring effective administration of resources, responding to community needs, acting in an ethical manner, and answering to political, legal, and social needs in the education culture (Council of Chief State School Officers, 2008).

## **Overview of Years of Service**

An additional demographic variable that may affect job satisfaction is years of service with an organization (Jennings, 1999). Years of service is referred to as the number of years a person has been employed in the current workplace (Jennings, 1999). According to Bretz and Judge (1994), years of service with an organization is the most basic indicator of satisfaction because it “purportedly represents a state in which the individual finds the work environment to be acceptable, and the environment finds the individual to be acceptable” (p. 33). Some studies have indicated that years of service with the organization, regardless of how it is measured, may be a more stable predictor of job satisfaction than other factors (Bedeian et al., 1992).

A number of factors may be attributed to the reasons individuals remain employed with the same organization for a length of time. One of these factors may include the opportunity for promotion by advancing in one’s career (Spector, 2007). Promotions may be offered to employees based on experience in the job, organization, and industry or job performance. Individuals promoted to senior advisory and supervisory positions are likely to experience job satisfaction that lead to other extrinsic indicators of success, for example, pay, and remain in the organizations for a longer period.

Pay, an extrinsic job satisfaction indicator, is another factor that could impact an employee’s decision to remain affiliated with an organization for a length of time. Although, studies show pay level minimally influences job satisfaction (Bretz, & Judge, 1994; Spector, 1997), other studies found a strong correlation with job satisfaction and salary (Al-Zoubi, 2012). Overall, pay may not be as important to job satisfaction among

long term employees, as pay fairness, lack of opportunities for career advancement, or the possibility of promotion or job security (Al-Zoubi, 2012; Spector, 1997).

Job satisfaction may be increased when employees with length of years view work and roles as challenging and varied. Supervisors in senior positions have work experience, valuable skills, and know what motivates employees; therefore, they can design job assignments and create incentives to encourage employee production, and serve, as mentors to new employees. Finally, veteran employees find satisfaction in providing stability to the work environment and appreciate a sense of confidence among coworkers and supervisors due to increased ability to perform and relate to colleagues (Jennings, 1999).

While studies on length of years and job satisfaction have been conducted in industrial organizations and occupational psychology, research related to length of years is limited in the educational setting (Shore & Martin, 1989). An undersized body of research that has examined the phenomenon of length of years, educational organization behaviors, and job satisfaction is found in a few research studies (Allan & Meyer, 2011; Barnes, Crowe, & Schaefer, 2007; Meyer & Allan, 1991; Shore & Wayne, 1993; Watlington, Shockley, Guglielmino, & Felsher, 2010). Meyer & Allan (1991) studied length of years and employee perceived positive attitudinal commitment behaviors (p. 61). Positive attitudinal commitment behavior is referred to as the emotional attachment a person feels toward an organization including involvement in, and membership enjoyment with the organization (Shore & Wayne, 1993). Results from studies indicate perceived organizational support creates feelings of responsibility, enhances work

behavior, and is the best predictor for an employee to extend their years with the organization (Shore & Wayne, 1993).

Benefits to the organization when employees commit to the work place include decreased fiscal operations (Ramlall, 2004). Fiscal operations include reduction in teacher turnover and employee absenteeism. A second benefit is one's willingness to invest personal energy in the work due to a greater level of trust among their colleagues (Watlington, et al., 2010). Sustainability is a third benefit affecting organizations as employees extend the length of years. According to Fullan (2002), key components of sustainability are "developing the social environment, learning in context, cultivating leaders at many levels, and enhancing the teaching profession" (p. 19).

A large body of research related to job satisfaction during modern time is based on the work of Taylor, Judge, and Spector. Taylor developed scientific management principals at the beginning of the 20<sup>th</sup> century to examine factors affecting employee motivation and job satisfaction. Spector studied job satisfaction from a global and facet perspective to develop the JSS. Judge examined temperament types and job satisfaction. Motivational theorists who have contributed to job satisfaction research include Maslow's Hierarch of Needs and Herzberg's Two Factor theory. Additional variables considered to contribute to job satisfaction are a person's job role and years of service to an organization.

### **Summary**

A review of literature presents information on temperament types, job satisfaction, job roles, and years of service. Temperament type research studies have enjoyed a long a varied history. Beginning in ancient times, temperament theories were



developed by Hippocrates and Galan. Theorists that are more modern include Jung, Briggs, Briggs-Myers, and Keirsey. The researchers have contributed to understanding a person's typology that can be measured and understood in practical terminology through valid and reliable measurement instruments. Temperament trait phenomenon remains a popular research topic in industry and education. Temperament types are a personal antecedent of job satisfaction and may be measured using diverse instrument models. Myers-Briggs Type Indicator and Keirsey Temperament Sorter ®- II model have dominated the personality research literature in recent years, adding understanding to providing employers and school officials with structures that bring greater satisfaction to the workplace.

Understanding the facets of job satisfaction in the United States is necessary for establishing productive and supportive work environments with satisfied employees. The increasing demands on industry and school organizations to educate and develop qualified workers have resulted in closely examining individual facets that affect job satisfaction. One way to measure the nine job-related facets is using the Job Satisfaction Survey designed by Paul Spector.

The presentation of methodology and procedures used for data collection and analysis is found in chapter three. Chapter four includes a description and the results of the data analysis are described. Summaries and findings are discussed in chapter five along with the explanation of for practice, conclusions, and suggestions for future research.

## **Chapter Three**

### **Methods**

This chapter contains information about the research methods for this survey study on the relationship between temperament, job satisfaction, job role, and years of service of Doctor of Education candidates and graduates. First, this survey study was designed to examine the extent to which there was a relationship between job satisfaction and temperament. A second purpose for this survey study was designed to examine the extent to which there was a relationship between job satisfaction and job role. The third purpose for this survey study was to examine the extent to which there was a relationship between job satisfaction and years of service affected by temperament. The fourth purpose for this survey study was to examine the relationship between job satisfaction and years of service. The fifth purpose for this survey study was to examine the relationship between job satisfaction and years of service affected by temperament. Information about the population sample and procedures of selecting individuals to be part of the study are included in the chapter. Instruments and their validity and reliability including how they measure the variables are found in this section. Data collection and hypothesis testing along with the limitations of the study complete the chapter.

### **Research Design**

This study involved a quantitative design using a survey. Quantitative research is based on the scientific model that uses observable and numerical data to conduct hypothesis tests. Using numbers and statistical methods based on measurements of a study makes the research easy to replicate by others (Thomas, 2003). Researchers using quantitative research methods know in advance, what they are looking for and design the

study before data are collected. If data does not naturally exist in numerical measurable quantitative form, a research instrument can be designed to collect information that can be analyzed statistically (Muijs, 2011). According to Creswell (2009), researchers conducting a quantitative design study “frequently use a survey instrument to gather a numeric description of trends, attitudes, or opinions of large populations” (p. 145). The survey instrument allows participants to rate their feelings or beliefs. The respondent’s attitudes and beliefs can be generalized from the sample to determine the results and used in a quantitative study.

### **Population and Sample**

The population for this study consisted of Doctor of Educational leadership candidates and graduates from a small, private liberal arts university located in a large, middle to upper class suburban setting. At the time of this study, 11 cohorts had completed course work and of those 11, nine had completed taking the KTS®-II. The sample for this study consisted of candidates and graduates from cohorts one through nine.

### **Sampling Procedures**

The Doctor of Educational leadership candidates and graduates from a small, private, liberal arts university were purposefully sampled by the researcher because they met criteria for being included in the study. One criterion required for the study was participants had been enrolled in a Doctor of Educational Leadership program. Additional criteria required for the study were participants were members of cohort’s one through nine, and were enrolled in course work between the years 2005 and 2012. A final criterion for the survey study was participants were required to have taken the

KTS®-II for Collaborative Leadership in Community Context or Professional Colloquium I. Doctor of Educational Leadership candidates and graduates in cohorts one through nine were invited by researcher to participate voluntarily in the JSS online survey in the fall of 2014.

### **Instrumentation**

Two instrument tools were used in the study. The first instrument is the JSS that was developed by Paul E. Spector to assess employee attitudes and aspects of the job as well as overall satisfaction (Spector, 1997). The second instrument is the KTS ®-II that was developed by David Keirsey to identify temperament type (Keirsey, 1997).

Additional questions were included in the web based survey to collect data on job role and years of service.

The JSS is a 35 item, nine facet scale designed to assess employee attitudes and factors related to the job (Spector, 1997). The nine facets are pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication.

Pay describes recompense, compensation, or salary earned (Spector, 1997). Information related to pay can be found in district salary schedules, which reflect years of teaching and level of education (Bretz, & Judge, 1994; Lester & Bishop, 2000; Spector, 1997, 2007). Promotion is the opportunity for career advancement (Spector, 2007). Career advancement depends on the district or the school setting. Promotion can include gaining position requiring more supervisory work in the capacity as administrative assistant or accepting more responsibilities for more pay such as a curriculum coordinator or grade level chair (Lester & Bishop, 2000).

Supervision is identified in the school setting as the building level administrative team (Lester & Bishop, 2000). A licensed building level administrator is a leader of learning who has the capacity for developing a team able to deliver effective instruction. Spector (1997), described supervision as a person's immediate supervisor (p. 8). Fringe benefits refer to the "monetary and non-monetary benefits" other than pay and may be included with the employment position. Retirement, life and health insurance plans, and vacation time are four of the major benefits provided by employers (Spector, 2007).

Contingent rewards may be recognition and gratitude for a job well done and are not necessarily monetary (Spector, 1997; 2007). Monetary or non-monetary types of contingent rewards may include bonuses, praise, excellent service award, or internal promotion from school leaders (Lester & Bishop, 2000). Contingent rewards may be given for outstanding performance. Operating procedures include rules, policies, procedures, workload, and job appraisals (Spector, 2007).

Coworkers refer to relationships individuals have with other colleagues in a school or other work settings. Teachers, principals, parent volunteers, and para-professionals are examples of coworkers who have meaningful interactions and engage in professional activities (Lester & Bishop, 2000; Spector, 2007). Nature of work refers to the extent of enthusiasm with which one performs job responsibilities and tasks (Spector, 2007). Examples would include attending professional development sessions, serving on school committees, and performing school related duties. Communication refers to sharing of information within an establishment or organization (Spector, 2007). Effective communication includes communicating messages that are direct, complete, relevant, and congruent.

The JSS yields 9 facet scores and a summated score reflecting overall job satisfaction. The overall job satisfaction score is computed by combining all 35 items for a total score. A copy of the JSS can be found in Appendix D.

Each item is selected by indicating the alternative that most likely reflects a person's job experience. The JSS uses a Likert-type rating scale format with six choices per item ranging from disagree very much to agree very much as shown below.

1 = Disagree very much

2 = Disagree moderately

3 = Disagree slightly

4 = Agree slightly

5 = Agree moderately

6 = Agree very much

Some of the items are stated in a positive direction while others in a negative direction (Spector, 1997). Positively worded items indicate level of satisfaction with the job. An example of a positively worded item on subscale two is stated as, "I am satisfied with my chances for promotion." For this item, a rating of 1 would indicate low satisfaction with promotion and a rating of 6 would indicate a high level of satisfaction with promotion. A negatively worded item indicates a feeling of dissatisfaction. An example of a negatively worded item on subscale two is stated, "There is really too little chance for promotion on my job." For this item, a rating of 1 would indicate high satisfaction with chances for promotion and a rating of 6 would indicate low satisfaction with chances for promotion. Before scores for the nine facets of satisfaction and for overall satisfaction were calculated, the negatively worded items were reversed coded.

For example, a rating of 6 was changed to 1, 5 was changed to 2, 4 was changed to 3, 3 was changed to 4, 2 was changed to 5, and 1 was changed to 6. Negatively worded items on the JSS are 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 24, 26, 28, 30, 31, 33, and 35 (Spector, 1985, 1997). The scale facets were not modified and the original agree-disagree response choices from Spector (1997) were used. The subscales for job facets and item numbers are shown in Table 1 below.

Table 1

*Job Satisfaction Survey Facets*

Facet Subscale	Item Numbers
Pay	1, 10, 19
Promotion	2, 11, 20, 32
Supervision	3, 12, 21, 29
Fringe Benefits	4, 13, 22, 28
Contingent rewards	5, 14, 23, 31
Operating conditions	6, 15, 24, 30
Coworkers	7, 16, 25, 33
Nature of work	8, 17, 27, 34
Communication	9, 18, 26, 35
Total satisfaction	1, 2, 3,... 35

The KTS®-II developed by David Keirsej was used to evaluate an individual's temperament type (Keirsej, 1998). The self-administered standardized questionnaire consists of 70 items, with two forced choices to each question. For example, to determine one's propensity toward extroversion or introversion, one question on the KTS®-II is stated as, "Are you inclined to be easy to approach or are you inclined to be

somewhat reserved?” (Keirsey, 1998). The respondent is required to select one of the two choices. Keirsey (1998) used letters to describe the sixteen personality types of personality with description words including E = expressive or I = reserved, S = observant or N= introspective, T = tough minded or F = friendly and J = scheduling or P = probing (p. 12). The four temperament groups include Stabilizers (SJ), which characterizes observant and scheduling temperament, Troubleshooters (SP) describes observing and probing characteristics, Seeker (NF) refers to introspective and friendly temperament, and Analyst (NT) characterizes introspective and tough minded temperament type. For example, INTJ type represents the four domains of temperament as well as four of the eight preferred cognitive activities of the participant. The test is designed to measure the respondent’s temperament traits based on the temperament archetypes of Jung (Keirsey, 1998).

The additional questions included on the online survey identified job roles and years of service. Job role was categorized as PK 12 Educators, PK 12 Administrators, Higher Education Educator, and Higher Education Administrator. Years of service referred to length of time the respondent was employed in the current position. The question required an open-ended response.

**Measurement.** Job satisfaction is often measured with questionnaires or surveys to determine areas of fulfillment or discontent among employees in an organization. The JSS was designed to assess nine facets of job and overall satisfaction. JSS facets are pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. The nine facets are addressed on the 35



item questionnaire. The design for the JSS survey uses a summated rating scale format (Spector, 1997).

Online survey data from the JSS was used as a numeric measurement of self-perception of job satisfaction. Respondents were able to indicate their attitudes on job satisfaction related to pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. The JSS overall satisfaction was based on the sum of all 35 items and ranged from 35 to 216.

As stated previously, participants were required to have taken the KTS®-II for Collaborative Leadership in Community Context or Professional Colloquium I. Archived data from the KTS®-II was used to measure the individual's temperament. Temperament was categorized as Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), and Analyst (NT).

Job role was a variable identified on the survey. Respondents indicated their job role at the time of entering the doctoral program. The items indicated the individual's job role was categorized PK-12 Educator, PK-Administrator, Higher Education Educator (HE Educator), Higher Education Administrator (HE Administrator), and Other. Responses to the survey item by the candidates and graduates indicated job role, which may be of interest to the university administration and admissions office when admitting new students to the post graduate program.

Another variable measured on the survey was years of service in the organization. Doctoral candidates and graduates indicated the number of years they have been employed with the current organization in an open-ended question. Participants filled in the blank with their total years' experience with the current organization. Responses were grouped into two categories, 0-3 years and 4+ years by the researcher

after the survey was closed. Responses to the survey item by the doctoral candidates and graduates indicated length of years, which may be most likely satisfied with the current employer.

**Validity and reliability.** Validity and reliability for the JSS have been frequently investigated. Discriminant and convergent validity of the JSS has been established through correlation analysis using comparison with other measures of job satisfaction facets (Spector, 1985, 1997). According to Spector (1985), the major evidence for discriminant and convergent validities was provided by a “multitrait-multimethod” analysis comparing the JSS and Job Descriptive Index (JDI) (p. 701). The Job Descriptive Index (JDI), developed by Patricia Smith is considered one of the most popular facet job satisfaction scales among organizational researchers (Spector, 1997). The JDI assesses five facets: work, pay, promotion, supervision, and co-workers. For example, five JSS subscales (pay, promotion, supervision, coworkers, and the nature of work) showed a strong correlation between corresponding subscales of the JDI (Spector, 1997). The correlations ranged from .61 for coworkers to .80 for supervision. Internal consistencies for JSS reliability were reported from a sample of 3,067 individuals who completed the JSS. Cronbach’s alpha coefficients ranged from .60 for the coworker subscale to .91 for total scale (Spector, 1997). These coefficients provided evidence for moderate to strong reliability of the JSS. Cronbach’s alpha coefficients between .37 and .74 were calculated for a smaller sample of 43 workers over a period of 18 months indicating the JSS has an acceptable level of reliability. These coefficients provided evidence for weak to moderately strong for reliability for the JSS.

The KTS®-II assessment is validated based on concurrent validity. Concurrent or predictive validity is a measure of how closely a particular test correlates with results from other dissimilar tests (Creswell, 2009). Validity for the KTS®-II has been investigated in several studies (Kelly & Jugovic, 2001; Quinn, Lewis, & Fischer, 1992; Tucker & Gillespie, 1993). Concurrent validity coefficients between the KTS®-II and MBTI ranged from .54 to .74 (Quinn, et al., 1992), from .68 to .84 (Tucker & Gillespie, 1993), and from .60 to .78 (Kelly & Jugovic, 2001). Concurrent validity correlations between the KTS®-II and MBTI provide moderately strong evidence that both instruments measure the same information. The purpose of the MBTI is to make the theory of psychological types described by Jung understandable and practical in people's lives.

Francis, Craig, & Robbins (2008) reported reliability found in the KTS®-II to be evidenced by satisfactory internal consistency. The study consisted of 331 students in American universities. Researchers found the KTS®-II temperament dimensions achieved Cronbach alpha coefficients of 0.74 (Extroversion, Introversion), 0.89 (Sensing, Intuiting, 0.87 (Thinking, Feeling), and 0.88 (Judging, Perceiving) (Francis, Craig, and Robbins, 2008). A study conducted in 2001 by Fearn, Francis, and Wilcox surveyed 367 United Kingdom university students and found the "KTS®-II temperament dimensions were generally internally consistent, achieving Cronbach alpha coefficients above 0.65" (Fearn, Francis, & Wilcox, 2001). These are moderately strong evidence for reliability.

### **Data Collection Procedures**

The researcher asked for and received permission to conduct the study examining nine education leadership cohorts consisting of doctorate candidates' and graduates'

levels of job satisfaction and the Keirsey temperament type from the university IRB committee located in the Appendix. A letter of introduction, explanation of the study, and invitation to participate was emailed to each university doctoral candidate and graduate related to the study. The online SurveyMonkey url link survey was included in the email sent to all candidates and graduates identified in this study. All participants were provided an access code for the web based survey. Individuals volunteered to respond to the JSS online survey during fall 2014. The researcher employed a research assistant to merge the data from The JSS online survey and KTS®-II in order to protect the anonymity of participants who responded to the survey. Responses were merged by the research assistant not associated with any individual in the study to determine which temperament type was most likely to be satisfied with their current position. Data from the JSS were collected, merged, and compiled into an XL spreadsheet by a research assistant. Upon the compilation of the survey results, merged data were transferred to the researcher for the purpose of the study. The researcher received the raw data from the research assistant via email. Raw data were converted to IBM® SPSS® Statistics Faculty Pack 22 for Windows.

Data were collected for the KTS®-II indicators from cohorts one through nine beginning in 2005 through 2012. Participants had responded to the self-administered KTS®-II online questionnaire to meet course requirements for the doctoral program. Participants were asked to identify the Keirsey temperament type on the online survey. Participants voluntarily responded to the online modified JSS. Information obtained from respondents was confidential, known only to the research assistant. None of the collected

data collected from each individual was stored or shared with anyone, once the study was completed.

### **Data Analysis and Hypothesis Testing**

Analysis of the data from JSS online survey was conducted after all participants completed their questionnaires. Thirty-five questions on the JSS online survey and the responses previously collected from KTS®-II were used for data analysis and hypothesis testing. Demographic factors identified as job role and years of service were additional factors used for data analysis and testing. Both one and two-factor analyses of variance (ANOVA) were conducted to test the hypotheses.

**RQ 1.** To what extent is there a relationship between job satisfaction and temperament?

**H1.** There is a significant relationship between satisfaction with pay and temperament.

A one-factor ANOVA was conducted to test H1. The categorical variable used to group the dependent variable, satisfaction with pay, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H2.** There is a significant relationship between satisfaction with promotion and temperament.

A one-factor ANOVA was conducted to test H2. The categorical variable used to group the dependent variable, satisfaction with promotion, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H3.** There is a significant relationship between satisfaction with supervision and temperament.

A one-factor ANOVA was conducted to test H3. The categorical variable used to group the dependent variable, satisfaction with supervision, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H4.** There is a significant relationship between satisfaction with benefits and temperament.

A one-factor ANOVA was conducted to test H4. The categorical variable used to group the dependent variable, satisfaction with benefits, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H5.** There is a significant relationship between satisfaction with contingent rewards and temperament.

A one-factor ANOVA was conducted to test H5. The categorical variable used to group the dependent variable, satisfaction with contingent rewards, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H6.** There is a significant relationship between satisfaction with operating procedures and temperament.

A one-factor ANOVA was conducted to test H6. The categorical variable used to group the dependent variable, satisfaction with operating procedures, was temperament

(Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H7.** There is a significant relationship between satisfaction with co-workers and temperament.

A one-factor ANOVA was conducted to test H7. The categorical variable used to group the dependent variable, satisfaction with co-workers, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H8.** There is a significant relationship between satisfaction with the nature of work and temperament.

A one-factor ANOVA was conducted to test H8. The categorical variable used to group the dependent variable, satisfaction with the nature of work, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H9.** There is a significant relationship between satisfaction with communication and temperament.

A one-factor ANOVA was conducted to test H9. The categorical variable used to group the dependent variable, satisfaction with communication was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**H10.** There is a significant relationship between overall job satisfaction with and temperament.

A one-factor ANOVA was conducted to test H10. The categorical variable used to group the dependent variable, job satisfaction, was temperament (Troubleshooter (SP), Stabilizer (SJ), Seeker (NF), Analyst (NT)). The level of significance was set at .05.

**RQ 2.** To what extent is there a relationship between job satisfaction and job role?

**H11.** There is a significant relationship between satisfaction with pay and job role.

A one-factor ANOVA was conducted to test H11. The categorical variable used to group the dependent variable, satisfaction with pay, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H12.** There is a significant relationship between satisfaction with promotion and job role.

A one-factor ANOVA was conducted to test H12. The categorical variable used to group the dependent variable, satisfaction with promotion, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H13.** There is a significant relationship between satisfaction with supervision and job role.

A one-factor ANOVA was conducted to test H13. The categorical variable used to group the dependent variable, satisfaction with supervision, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.



**H14.** There is a significant relationship between satisfaction with benefits and job role.

A one-factor ANOVA was conducted to test H14. The categorical variable used to group the dependent variable, satisfaction with benefits, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H15.** There is a significant relationship between satisfaction with contingent rewards and job role.

A one-factor ANOVA was conducted to test H15. The categorical variable used to group the dependent variable, satisfaction with contingent rewards, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H16.** There is a significant relationship between satisfaction with operating procedures and job role.

A one-factor ANOVA was conducted to test H16. The categorical variable used to group the dependent variable, satisfaction with operating procedures, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H17.** There is a significant relationship between satisfaction with co-workers and job role.

A one-factor ANOVA was conducted to test H17. The categorical variable used to group the dependent variable, satisfaction with co-workers, was job role (PK-12

educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H18.** There is a significant relationship between satisfaction with the nature of work and job role.

A one-factor ANOVA was conducted to test H18. The categorical variable used to group the dependent variable, satisfaction with the nature of work, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H19.** There is a significant relationship between satisfaction with communication and job role.

A one-factor ANOVA was conducted to test H19. The categorical variable used to group the dependent variable, satisfaction with communication, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**H20.** There is a significant relationship between overall job satisfaction with and job role.

A one-factor ANOVA was conducted to test H20. The categorical variable used to group the dependent variable, satisfaction with overall job satisfaction, was job role (PK-12 educator, PK-12 administrator, HE educator, HE administrator, Other). The level of significance was set at .05.

**RQ 3.** To what extent is the relationship between job satisfaction and job role affected by temperament?

The two factor ANOVAs that were intended to address RQ 3 could not be conducted because of sample size issues in three of the cells. Attempts to collapse across categories did not improve the sample size in those cells.

**RQ 4.** To what extent is there a relationship between job satisfaction and years of service?

**H21.** There is a statistically significant relationship between satisfaction with pay and years of service.

A two-factor ANOVA was conducted to test H21. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H21. The level of significance was set at .05.

**H22.** There is a statistically significant relationship between satisfaction with promotion and years of service.

A two-factor ANOVA was conducted to test H22. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H22. The level of significance was set at .05.

**H23.** There is a statistically significant relationship between satisfaction with supervision and years of service.

A two-factor ANOVA was conducted to test H23. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main

effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H23. The level of significance was set at .05.

**H24.** There is a statistically significant relationship between satisfaction with benefits and years of service.

A two-factor ANOVA was conducted to test H24. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H24. The level of significance was set at .05.

**H25.** There is a statistically significant relationship between satisfaction with contingent rewards and years of service.

A two-factor ANOVA was conducted to test H25. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H25. The level of significance was set at .05.

**H26.** There is a statistically significant relationship between satisfaction with operational procedures and years of service.

A two-factor ANOVA was conducted to test H26. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction

effect for years of service by temperament. The main effect for years of service was used to test H26. The level of significance was set at .05.

**H27.** There is a statistically significant relationship between satisfaction with co-workers and years of service.

A two-factor ANOVA was conducted to test H27. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H27. The level of significance was set at .05.

**H28.** There is a statistically significant relationship between satisfaction with the nature of work and years of service.

A two-factor ANOVA was conducted to test H28. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H28. The level of significance was set at .05.

**H29.** There is a statistically significant relationship between satisfaction with communication and years of service.

A two-factor ANOVA was conducted to test H29. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilize Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H29. The level of significance was set at .05.

**H30.** There is a statistically significant relationship between overall job satisfaction and years of service.

A two-factor ANOVA was conducted to test H30. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction effect for years of service by temperament. The main effect for years of service was used to test H30. The level of significance was set at .05.

**RQ 5.** To what extent is the relationship between job satisfaction and years of service affected by temperament.

**H31.** The relationship between satisfaction with pay and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H31. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction effect for years of service by temperament. The interaction between years of service and temperament was used to test H31. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H32.** The relationship between satisfaction with promotion and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H32. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an

interaction between years of service and temperament. The interaction between years of service and temperament was used to test H32. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H33.** The relationship between satisfaction with supervision and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H33. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. The interaction between years of service and temperament was used to test H33. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H34.** The relationship between satisfaction with benefits and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H34. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. The interaction between years of service and temperament was used to test H34. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H35.** The relationship between satisfaction with contingent rewards and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H35. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. The interaction between years of service and temperament was used to test H35. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H36.** The relationship between satisfaction with operating procedures and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H36. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. The interaction between years of service and temperament was used to test H36. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H37.** The relationship between satisfaction with co-workers and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H37. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an



interaction between years of service and temperament. The interaction between years of service and temperament was used to test H37. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H38.** The relationship between satisfaction with the nature of work and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H38. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. The interaction between years of service and temperament was used to test H38. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H39.** The relationship between satisfaction with communication and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H39. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. The interaction between years of service and temperament was used to test H39. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

**H40.** The relationship between overall job satisfaction and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H40. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. The interaction between years of service and temperament was used to test H40. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The level of significance was set at .05.

### **Limitations**

This study described samples from Educational Leadership doctoral candidates and graduates in 1-9 cohorts in a small, private Midwest university. The study was limited by the number of respondents who voluntarily completed the survey. In addition, the study was limited to the number of candidates and graduates enrolled in the nine cohorts. The study was limited by the number and types of job roles and years of service.

### **Summary**

Chapter three has included information on the method of conducting the quantitative study on the relationship between job satisfaction, temperament, job role, and years of service to education. A voluntary online survey and temperament questionnaire were used to collect data for the study from nine cohort educational leadership doctoral candidates and graduates from the university. Limitations to the study were also included in the chapter. Chapter four contains data and analysis for the quantitative study.

Summaries and findings are discussed along with conclusions and suggestions for future research in chapter five.

## Chapter Four

### Results

While the previous three chapters contained the background, literature review, research questions and hypotheses, and methodology associated with this survey research, the purpose of chapter four is to present the results of the study. This chapter reports the results from the quantitative analysis used to address each of the research questions.

The hypotheses testing section contains results from one factor ANOVAs and a follow up Tukey's Honestly Significant Difference test, post hoc analyses conducted to determine if there was a statistically significant difference between job satisfaction and temperament for doctorate candidates and graduates. Further, the hypothesis testing section contains results from two factor ANOVAs and a follow up Tukey's Honestly Significant Difference test, post hoc analyses conducted to determine if job satisfaction, job role, and years of service were affected by temperament for doctorate candidates and graduates.

#### Hypothesis Testing

**RQ 1.** To what extent is there a relationship between job satisfaction and temperament?

**H1.** There is a significant relationship between satisfaction with pay and temperament.

A one-factor ANOVA was conducted to test H1. The categorical variable used to group the dependent variable, satisfaction with pay, was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there were no

statistically significant differences in satisfaction among the temperament categories,  $F = 1.18$ ,  $df = 3, 41$ ,  $p = .33$ . See Table 2 for the means and standard deviations for this analysis. A follow up post hoc was not warranted.

Table 2

*Descriptive Statistics for the Results of the Test for H1*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	8.67	1.15
Stabilizer	16	12.06	2.67
Seeker	9	10.22	3.99
Analyst	17	11.18	3.73

**H2.** There is a significant relationship between satisfaction with promotion and temperament.

A one-factor ANOVA was conducted to test H2. The categorical variable used to group the dependent variable, satisfaction with promotion was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there was a statistically significant difference in satisfaction between at least two of the temperament categories,  $F = 3.96$ ,  $df = 3, 41$ ,  $p = .01$ . See Table 3 for the means and standard deviations for this analysis. A post hoc, the Tukey's Honestly Significant Difference test was conducted at  $\alpha = .05$ . The average satisfaction rating ( $M = 16.19$ ) of the stabilizers was significantly higher than the satisfaction rating ( $M = 10.22$ ) of the seekers.

Table 3

*Descriptive Statistics for the Results of the Test for H2*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	16.00	3.46
Stabilizer	16	16.19	4.46
Seeker	9	10.22	5.24
Analyst	17	14.29	3.55

**H3.** There is a significant relationship between satisfaction with supervision and temperament.

A one-factor ANOVA was conducted to test hypothesis 3. The categorical variable used to group the dependent variable, satisfaction with supervision was temperament (Troubleshooter, Stabilizer, Seeker, Analyst ). The results of the analysis indicated there were no statistically significant differences in satisfaction among temperament categories,  $F = 1.55$ ,  $df = 3, 41$ ,  $p = 0.21$  See Table 4 for means and standard deviations for this analysis. A follow up post hoc was not warranted.

Table 4

*Descriptive Statistics for the Results of the Test for H3*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	21.33	3.79
Stabilizer	16	19.38	5.71
Seeker	9	17.78	6.30
Analyst	17	21.71	2..37

**H4.** There is a significant relationship between satisfaction with fringe benefits and temperament.

A one-factor ANOVA was conducted to test hypothesis 4. The categorical variable used to group the dependent variable, satisfaction with fringe benefits was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there were no statistically significant differences in satisfaction among temperament categories,  $F = 1.91$   $df = 3, 41$ ,  $p = 0.14$ . See Table 5 for the means and standard deviations for this analysis. A follow up post hoc was not warranted.

Table 5

*Descriptive Statistics for the Results of the Test for H4*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	19.33	1.53
Stabilizer	16	16.69	3.98
Seeker	9	13.22	3.56
Analyst	17	16.00	5.27

**H5.** There is a significant relationship between satisfaction with contingent rewards and temperament.

A one-factor ANOVA was conducted to address H5. The categorical variable used to group the dependent variable, satisfaction with contingent rewards was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there were no statistically significant differences in satisfaction among temperament categories,  $F = .79$ ,  $df = 3, 41$ ,  $p = .50$ . See Table 6 for the means and standard deviations for this analysis. A follow up post hoc was not warranted.

Table 6

*Descriptive Statistics for the Results of the Test for H5*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	18.33	2.08
Stabilizer	16	16.94	5.72
Seeker	9	14.44	5.10
Analyst	17	16.53	3.18

**H6.** There is a significant relationship between satisfaction with operating procedures and temperament.

A one-factor ANOVA was conducted to test H6. The categorical variable used to group the dependent variable, satisfaction with operating procedures, was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there were no statistically significant differences in satisfaction among temperament categories,  $F = .28$ ,  $df = 3, 41$ ,  $p = .84$ . See Table 7 for the means and standard deviations for this analysis. A follow up post hoc was not warranted.

Table 7

*Descriptive Statistics for the Results of the Test for H6*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	14.67	4.04
Stabilizer	16	14.06	5.01
Seeker	9	15.33	2.45
Analyst	17	13.71	4.65



**H7.** There is a significant relationship between satisfaction with coworkers and temperament.

A one-factor ANOVA was conducted to test H7. The categorical variable used to group the dependent variable, satisfaction with co-workers, was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there was a marginally significant difference in satisfaction between at least two the temperament categories,  $F = 2.20$ ,  $df = 3, 41$ ,  $p = .10$ . See Table 8 for the means and standard deviations for this analysis. A follow up post hoc was not warranted. Although the difference was not statistically significant, the average satisfaction rating ( $M = 16.82$ ) of the analyst was higher than the satisfaction rating ( $M = 12.67$ ) of the troubleshooters.

Table 8

*Descriptive Statistics for the Results of the Test for H7*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	12.67	2.89
Stabilizer	16	15.75	3.57
Seeker	9	15.00	2.83
Analyst	17	16.82	1.91

**H8.** There is a significant relationship between satisfaction with the nature of work and temperament.

A one-factor ANOVA was conducted to test H8. The categorical variable used to group the dependent variable, satisfaction with the nature of work, was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there were no statistically significant differences in satisfaction among temperament categories,

$F = 1.17$ ,  $df = 3, 41$ ,  $p = .33$ . See Table 9 for the means and standard deviations for this analysis. A follow up post hoc was not warranted.

Table 9

*Descriptive Statistics for the Results of the Test for H8*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	19.00	1.00
Stabilizer	16	17.69	1.54
Seeker	9	16.67	3.64
Analyst	17	17.76	1.20

**H9.** There is a significant relationship between satisfaction with communication and temperament.

A one-factor ANOVA was conducted to test H9. The categorical variable used to group the dependent variable, satisfaction with communication, was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there was a marginally significant difference in satisfaction between at least two the temperament categories,  $F = 2.76$ ,  $df = 3, 41$ ,  $p = .05$ . See Table 10 for the means and standard deviations for this analysis. Although the difference was not statistically significant, the average satisfaction rating ( $M = 18.35$ ) of the analyst was higher than the satisfaction rating ( $M = 13.33$ ) of the seeker. A follow up post hoc was not warranted.

Table 10

*Descriptive Statistics for the Results of the Test for H9*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	17.67	5.03
Stabilizer	16	16.69	5.12
Seeker	9	13.33	4.18
Analyst	17	18.35	3.22

**H10.** There is a significant relationship between overall job satisfaction and temperament.

A one-factor ANOVA was conducted to test H10. The categorical variable used to group the dependent variable, overall satisfaction, was temperament (Troubleshooter, Stabilizer, Seeker, Analyst). The results of the analysis indicated there were no statistically significant differences in satisfaction among temperament categories,  $F = 1.60$   $df = 3, 41$ ,  $p = 0.20$ . See Table 11 for the means and standard deviations for this analysis. A follow up post hoc was not warranted.

Table 11

*Descriptive Statistics for the Results of the Test for H10*

Keirsey Temperament	<i>N</i>	<i>M</i>	<i>SD</i>
Troubleshooter	3	147.67	14.05
Stabilizer	16	145.44	30.59
Seeker	9	126.22	24.24
Analyst	17	146.35	17.95

**RQ 2.** To what extent is there a relationship between job satisfaction and job role?

**H11.** There is a statistically significant relationship between satisfaction with pay and job role.

A one-factor ANOVA was conducted to test H11. The categorical variable used to group the dependent variable, satisfaction with pay, was job role (Pre K- 12 instructor, Pre K-12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there was a marginally significant difference in satisfaction between at least two of the temperament categories,  $F = 2.36, df = 4, 40, p = .07$ . See Table 12 for the means and standard deviations for this analysis. A follow up post hoc was not warranted. Although the difference was not statistically significant, the average satisfaction rating ( $M = 13.00$ ) of the higher education instructors was higher than the satisfaction rating ( $M = 7.86$ ) of the Pre-K-12 instructors.

Table 12

*Descriptive Statistics for the Results of the Test for H11*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	7.86	2.04
PK12 Administrator	22	11.68	3.52
HE Instructor	3	13.00	2.65
HE Administrator	7	11.29	3.73
Other	6	11.83	2.04

**H12.** There is a statistically significant relationship between satisfaction with promotion and job role.

A one-factor ANOVA was conducted to test H12. The categorical variable used to group the dependent variable, satisfaction with promotion, was job role (Pre K- 12 instructor, Pre K- 12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there was a marginally significant difference in satisfaction between at least two of the job role categories,  $F = 2.33$ ,  $df = 4, 40$ ,  $p = .070$ . See Table 13 for the means and standard deviations for this analysis. A follow up post hoc was not warranted. Although the difference was not statistically significant, the average satisfaction rating ( $M = 18.33$ ) of the higher education instructors was higher than the satisfaction rating ( $M = 11.29$ ) of the Pre-K-12 instructors.

Table 13

*Descriptive Statistics for the Results of the Test for H12*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	11.29	4.92
PK12 Administrator	22	15.55	3.81
HE Instructor	3	18.33	3.06
HE Administrator	7	13.29	6.87
Other	6	12.17	2.23

**H13.** There is a statistically significant relationship between satisfaction with supervision and job role.

A one-factor ANOVA was conducted to test H13. The categorical variable used to group the dependent variable, satisfaction with supervision, was job role (Pre K- 12 instructor, Pre K -12 Administrator, Higher Education Instructor, Higher Education

Administrator, Other). The results of the analysis indicated there was a marginally significant difference in satisfaction between at least two of the job role categories,  $F = 2.33$ ,  $df = 4, 40$ ,  $p = .073$ . See Table 14 for the means and standard deviations for this analysis. A follow up post hoc was not warranted. Although the difference was not statistically significant, the average satisfaction rating ( $M = 23.67$ ) of the higher education instructors was higher than the satisfaction rating ( $M = 16.43$ ) of the higher education administrators.

Table 14

*Descriptive Statistics for the Results of the Test for H13*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	19.29	5.47
PK12 Administrator	22	21.23	3.41
HE Instructor	3	23.67	0.58
HE Administrator	7	16.43	7.28
Other	6	19.17	4.88

**H14.** There is a statistically significant relationship between satisfaction with benefits and job role.

A one-factor ANOVA was conducted to test hypothesis 14. The categorical variable used to group the dependent variable, satisfaction with benefits, was job role (Pre K- 12 instructor, Pre K- 12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there were no statistically significant differences in satisfaction among the job role categories,  $F = 1.98$ ,

$df = 4, 40, p = .116$ . See Table 15 for the means and standard deviations for this analysis.

A follow up post hoc was not warranted.

Table 15

*Descriptive Statistics for the Results of the Test for H14*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	12.86	4.71
PK12 Administrator	22	16.50	4.59
HE Instructor	3	18.00	1.00
HE Administrator	7	15.14	3.89
Other	6	17.17	5.12

**H15.** There is a statistically significant relationship between satisfaction with contingent rewards and job role.

A one-factor ANOVA was conducted to test hypothesis 15. The categorical variable used to group the dependent variable, satisfaction with contingent rewards, was job role (Pre K- 12 instructor, Pre K- 12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there were no statistically significant differences in satisfaction among job role categories,  $F = 1.25$ ,  $df = 4, 40, p = .306$ . A follow up post hoc was not warranted.

Table 16

*Descriptive Statistics for the Results of the Test for H15*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	13.43	5.29
PK12 Administrator	22	17.41	3.95
HE Instructor	3	20.00	3.46
HE Administrator	7	15.86	5.79
Other	6	14.83	3.49

**H16.** There is a statistically significant relationship between satisfaction with operating procedures and job role.

A one-factor ANOVA was conducted to test H16. The categorical variable used to group the dependent variable, satisfaction with benefits, was job role (Pre K- 12 instructor, Pre K-12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there were no statistically significant differences in satisfaction among the job role categories,  $F = 1.79$ ,  $df = 4, 40$ ,  $p = .150$ . A follow up post hoc was not warranted.

Table 17

*Descriptive Statistics for the Results of the Test for H16*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	15.00	4.80
PK12 Administrator	22	13.27	3.94
HE Instructor	3	19.33	2.08
HE Administrator	7	15.43	4.54
Other	6	12.83	4.45



**H17.** There is a statistically significant relationship between job satisfaction with co-workers and job role.

A one-factor ANOVA was conducted to test H17. The categorical variable used to group the dependent variable, satisfaction with co-workers, was job role (Pre K- 12 instructor, Pre K- 12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there were no statistically significant differences in satisfaction among the job role categories,  $F = .68$ ,  $df = 4, 40$ ,  $p = .612$ . A follow up post hoc was not warranted.

Table 18

*Descriptive Statistics for the Results of the Test for H17*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	15.29	2.43
PK12 Administrator	22	15.82	3.22
HE Instructor	3	18.00	1.00
HE Administrator	7	14.86	3.44
Other	6	16.33	2.58

**H18.** There is a statistically significant relationship between satisfaction with the nature of work and job role.

A one-factor ANOVA was conducted to test H18. The categorical variable used to group the dependent variable, satisfaction with the nature of work, was job role (Pre K- 12 instructor, Pre K- 12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there was a statistically significant difference in satisfaction between at least two of the job role categories,  $F =$

3.83,  $df = 4, 40, p = .010$ . A follow up post hoc, the Tukey's Honestly Significant Difference test was conducted at  $\alpha = .05$ . The average satisfaction rating ( $M = 18.67$ ) of the HE Instructor was significantly higher than the satisfaction rating ( $M = 15.00$ ) of the respondents of the Other category. The average satisfaction rating ( $M = 17.95$ ) of the Pre K- 12 Administrators was significantly higher than the satisfaction rating ( $M = 15.00$ ) of the respondents of the Other category. The average satisfaction rating ( $M = 18.29$ ) of the HE administrator was significantly higher than the satisfaction rating ( $M = 15.00$ ) of the respondents of the Other category.

Table 19

*Descriptive Statistics for the Results of the Test for H18*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	17.57	2.70
PK12 Administrator	22	17.95	1.17
HE Instructor	3	18.67	0.58
HE Administrator	7	18.29	0.95
Other	6	15.00	3.22

**H19.** There is a statistically significant relationship between satisfaction with communication and job role.

A one-factor ANOVA was conducted to test H19. The categorical variable used to group the dependent variable, satisfaction with communication, was job role (Pre K- 12 instructor, Pre K- 12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there was no statistically significant difference in satisfaction among job role categories,  $F = .692, df = 4, 40,$

$p = .602$ . A follow up post hoc was not warranted.

Table 20

*Descriptive Statistics for the Results of the Test for H19*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	16.57	5.56
PK12 Administrator	22	17.50	3.91
HE Instructor	3	18.00	3.00
HE Administrator	7	14.43	6.45
Other	6	16.00	3.69

**H20.** There is a statistically significant relationship between overall job satisfaction and job role.

A one-factor ANOVA was conducted to test H20. The categorical variable used to group the dependent variable, satisfaction with overall satisfaction, was job role (Pre K- 12 instructor, Pre K- 12 Administrator, Higher Education Instructor, Higher Education Administrator, Other). The results of the analysis indicated there was no statistically significant difference in overall satisfaction among job role categories,  $F = 1.817$ ,  $df = 4, 40$ ,  $p = .145$ . A follow up post hoc was not warranted.

Table 21

*Descriptive Statistics for the Results of the Test for H20*

Job Role	<i>N</i>	<i>M</i>	<i>SD</i>
PK 12 Instructor	7	129.14	26.40
PK12 Administrator	22	146.91	20.73
HE Instructor	3	167.00	13.89
HE Administrator	7	135.00	34.13
Other	6	135.33	21.82

**RQ 3.** To what extent is the relationship between job satisfaction and job role affected by temperament?

The two-factor ANOVAs, which were intended to address RQ 3, could not be conducted because of sample size issues in three of the cells. Attempts to collapse across categories did not improve the sample size in those cells. No results are available for RQ 3.

**RQ 4.** To what extent is there a relationship between job satisfaction and years of service?

**H21.** There is a statistically significant relationship between satisfaction with pay and years of service.

A two-factor ANOVA was conducted to test H21. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H 21. The level of significance was set at .05. The

results of the analysis indicated there was not a statistically significant difference between the means of the means,  $F = .08$ ,  $df = 1, 36$ ,  $p = .79$ . See Table 22 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 22

*Descriptive Statistics for the Results of the Test for H21*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	11.00	3.09
4+	24	11.54	3.68

**H22.** There is a statistically significant relationship between satisfaction with promotion and years of service.

A two-factor ANOVA was conducted to test H22. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament).. The main effect for years of service was used to test H22. The level of significance was set at .05. The results of the analysis indicated there was a statistically significant difference between the means,  $F = 4.323$ ,  $df = 1, 36$ ,  $p = .045$ . See Table 23 for means and standard deviation for this analysis. It is statistically significant. The newer teachers were more satisfied. On average the respondents with 0-3 years of service ( $M=15.33$ ) were more satisfied with promotion than respondents with 4+ years of experience ( $M=13.25$ ).

Table 23

*Descriptive Statistics for the Results of the Test for H22*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	15.33	4.59
4+	24	13.25	4.77

**H23.** There is a statistically significant relationship between satisfaction with supervision and years of service.

A two-factor ANOVA was conducted to test H23. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H23. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between the means,  $F = .616$ ,  $df = 1, 36$ ,  $p = .438$ . See Table 24 for means and standard deviation for this analysis. No follow up post hoc was warranted.

Table 24

*Descriptive Statistics for the Results of the Test for H23*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	20.50	4.66
4+	24	19.58	5.19

**H24.** There is a statistically significant relationship between satisfaction with fringe benefits and years of service.

A two-factor ANOVA was conducted to test H24. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H24. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between the means,  $F = .65$ ,  $df = 1, 36$ ,  $p = .44$ . See Table 25 for means and standard deviation for this analysis. No follow up post hoc was warranted.

Table 25

*Descriptive Statistics for the Results of the Test for H24*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	16.22	4.43
4+	24	15.25	4.72

**H25.** There is a statistically significant relationship between satisfaction with contingent rewards and years of service.

A two-factor ANOVA was conducted to test H25. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H25. The level of significance was set at .05. The results of the analysis indicated there was a marginally significant difference between the means,  $F = 4.08$ ,  $df = 1, 36$ ,  $p = .05$ . See Table 26 for means and standard deviation for this analysis. Although the difference was not statistically significant, on average

respondents with 0-3 years of experience ( $M = 17.50$ ) were more satisfied than respondents with 4+ years of service ( $M = 15.29$ ).

Table 26

*Descriptive Statistics for the Results of the Test for H25*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	17.50	4.11
4+	24	15.29	4.95

**H26.** There is a statistically significant relationship between satisfaction with operating procedures and years of service.

A two-factor ANOVA was conducted to test H26. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H26. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between the means,  $F = 2.65$ ,  $df = 1, 36$ ,  $p = .11$ . See Table 27 for means and standard deviation for this analysis. No post hoc was warranted.

Table 27

*Descriptive Statistics for the Results of the Test for H26*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	15.67	4.26
4+	24	13.08	4.22



**H27.** There is a statistically significant relationship between satisfaction with co-workers and years of service.

A two-factor ANOVA was conducted to test H27. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H27. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between the means,  $F = 1.06$ ,  $df = 1, 36$ ,  $p = .31$ . See Table 28 for means and standard deviation for this analysis. No post hoc was warranted.

Table 28

*Descriptive Statistics for the Results of the Test for H27*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	16.56	3.01
4+	24	15.63	2.73

**H28.** There is a statistically significant relationship between satisfaction with the nature of work and years of service.

A two-factor ANOVA was conducted to test H28. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H28. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between

the means,  $F = .04$ ,  $df = 1, 36$ ,  $p = .84$ . See Table 29 for means and standard deviation for this analysis. No post hoc was warranted.

Table 29

*Descriptive Statistics for the Results of the Test for H28*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	17.39	2.30
4+	24	17.58	1.89

**H29.** There is a statistically significant relationship between satisfaction with communication and years of service.

A two-factor ANOVA was conducted to test H29. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H29. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between the means,  $F = .98$ ,  $df = 1, 36$ ,  $p = .33$ . See Table 30 for means and standard deviation for this analysis. No post hoc was warranted.

Table 30

*Descriptive Statistics for the Results of the Test for H29*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	17.17	4.53
4+	24	16.25	4.62

**H30.** There is a statistically significant relationship between overall job satisfaction and years of service.

A two-factor ANOVA was conducted to test H30. The two-factor ANOVA can be used to test the interaction of three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst) and an interaction effect (years of service x temperament). The main effect for years of service was used to test H 30. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between the means,  $F = 2.41$ ,  $df = 1, 36$ ,  $p = .13$ . See Table 31 for means and standard deviation for this analysis. No post hoc was warranted.

Table 31

*Descriptive Statistics for the Results of the Test for H30*

Years of service	<i>N</i>	<i>M</i>	<i>SD</i>
0-3	18	147.33	24.07
4+	24	137.46	26.20

**RQ 5.** To what extent is the relationship between job satisfaction and years of service affected by temperament?

**H31.** The relationship between satisfaction with pay and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H31. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the

Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H31. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .01$ ,  $df = 2, 36$ ,  $p = .99$ . See Table 32 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 32

*Descriptive Statistics for the Results of the Test for H31*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	17.83	3.19	6
	4 +	15.20	4.96	10
Seeker	0-3	11.80	6.14	5
	4 +	8.25	3.69	4
Analyst	0-3	15.71	3.04	7
	4 +	13.30	3.68	10

*Note.* Years = Years of Service

**H32.** The relationship between satisfaction with promotion and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H32. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H

32. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .05$ ,  $df = 2, 36$ ,  $p = .95$ . See Table 33 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 33

*Descriptive Statistics for the Results of the Test for H32*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	17.83	3.19	6
	4 +	15.20	4.96	10
Seeker	0-3	11.80	6.14	5
	4 +	8.25	3.69	4
Analyst	0-3	15.71	3.04	7
	4 +	13.30	3.68	10

*Note.* Years = Years of Service

**H33.** The relationship between satisfaction with supervision and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H33. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H 33. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .33$ ,  $d = 2, 36$ ,

$p = .72$ . See Table 34 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 34

*Descriptive Statistics for the Results of the Test for H33*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	21.00	4.38	6
	4 +	18.40	6.40	10
Seeker	0-3	18.40	6.70	5
	4 +	17.00	6.68	4
Analyst	0-3	21.57	3.21	7
	4 +	21.80	1.75	10

*Note.* Years = Years of Service

**H34.** The relationship between satisfaction with fringe benefits and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H34. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H 34 .The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .82$ ,  $df = 2$ ,  $36$ ,  $p = .92$ . See Table 35 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 35

*Descriptive Statistics for the Results of the Test for H34*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	17.50	3.89	6
	4 +	16.20	4.16	10
Seeker	0-3	13.40	3.44	5
	4 +	13.00	4.24	4
Analyst	0-3	17.14	5.08	7
	4 +	15.20	5.51	10

*Note.* Years = Years of Service

**H35.** The relationship between satisfaction with contingent rewards and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H35. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H 35. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .93$ ,  $df = 2, 36$ ,  $p = .40$ . See Table 36 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 36

*Descriptive Statistics for the Results of the Test for H35*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	18.67	6.15	6
	4 +	15.90	5.51	10
Seeker	0-3	17.00	3.16	5
	4 +	11.25	5.62	4
Analyst	0-3	16.86	2.73	7
	4 +	16.30	3.59	10

*Note.* Years = Years of Service

**H36.** The relationship between satisfaction with operating procedures and years of service is affected by temperament.

A two-factor) ANOVA was conducted to test H36. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H 36. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .61$ ,  $df = 2$ , 36,  $p = .55$ . See Table 37 for means and standard deviation for this analysis. No follow-up post hoc was warranted



Table 37

*Descriptive Statistics for the Results of the Test for H36*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	16.83	5.71	6
	4 +	12.40	3.95	10
Seeker	0-3	15.80	2.49	5
	4 +	14.75	2.63	4
Analyst	0-3	14.57	4.16	7
	4 +	13.10	5.09	10

*Note.* Years = Years of Service

**H37.** The relationship between satisfaction with co-workers and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H37. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H37. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .65$ ,  $df = 2$ ,  $36$ ,  $p = .94$ . See Table 38 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 38

*Descriptive Statistics for the Results of the Test for H37*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	16.50	4.23	6
	4 +	15.30	3.27	10
Seeker	0-3	15.20	3.03	5
	4 +	14.75	2.99	4
Analyst	0-3	17.57	1.40	7
	4 +	16.30	2.11	10

*Note.* Years = Years of Service

**H38.** The relationship between satisfaction with the nature of work and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H38. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H38. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .24$ ,  $df = 2, 36$ ,  $p = .79$ . See Table 39 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 39

*Descriptive Statistics for the Results of the Test for H38*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	18.00	1.10	6
	4 +	17.50	1.88	10
Seeker	0-3	16.40	4.22	5
	4 +	17.00	3.37	4
Analyst	0-3	17.57	.98	7
	4 +	17.90	1.37	10

*Note.* Years = Years of Service

**H39.** The relationship between satisfaction with communication and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H39. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H 39. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = 1.83$ ,  $df = 2$ ,  $36$ ,  $p = .18$ . See Table 40 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 40

*Descriptive Statistics for the Results of the Test for H39*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	19.50	3.78	6
	4 +	15.00	5.23	10
Seeker	0-3	13.60	5.03	5
	4 +	13.00	3.56	4
Analyst	0-3	17.71	3.59	7
	4 +	18.80	3.05	10

*Note.* Years = Years of Service

**H40.** The relationship between overall job satisfaction and years of service is affected by temperament.

A two-factor ANOVA was conducted to test H40. The two-factor ANOVA can be used to test three hypotheses including a main effect for years of service (0-3, 4+), a main effect for temperament (Troubleshooter, Stabilizer, Seeker, Analyst), and an interaction between years of service and temperament. Because of sample size issues, the Troubleshooter category was eliminated from the variable temperament prior to the analysis. The interaction between years of service and temperament was used to test H 40. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between two of the means,  $F = .32$ ,  $df = 2, 36$ ,  $p = .73$ . See Table 41 for means and standard deviation for this analysis. No follow-up post hoc was warranted.

Table 41

*Descriptive Statistics for the Results of the Test for H40*

Keirsey Temperament	Years	<i>M</i>	<i>SD</i>	<i>N</i>
Stabilizer	0-3	157.67	29.63	6
	4 +	138.10	30.21	10
Seeker	0-3	131.80	22.93	5
	4 +	119.25	27.37	4
Analyst	0-3	149.57	15.69	7
	4 +	144.10	19.87	10

*Note.* Years = Years of Service

**Summary**

Chapter four presented quantitative data results utilizing descriptive statistics for specific research questions. Results of the hypothesis tests revealed there were significant and marginally significant relationships between job satisfaction and temperament, job role, and years of service. Along with the major findings of hypothesis testing, chapter five presents a brief review of the problem, purpose, research questions, and methodology of the study. The chapter also includes findings related to relevant literature, implications for action, and addresses recommendations for future research.

## Chapter Five

### Interpretation and Recommendations

The first four chapters introduced the background, purpose, and significance of the study; a review of the literature on job satisfaction, temperament, job role, and years of service; the research methodology utilized in the study; and the results of hypothesis testing related to the research questions. This chapter presents a brief review of the problem, purpose, research questions, methodology, and major findings of the study. Additionally, findings related to relevant literature on temperament and job satisfaction, implications for action, and recommendations for future research are addressed.

#### Study Summary

The study summary serves as a “diminutive-description” of chapters one through four of the study. Therefore, this section provides an overview of the problem, the purpose statement, the research questions, methodology, and a presentation of the major findings of the study (Roberts, 2004). This section continues with the major findings related to the scholarly literature outlined in chapter two.

**Overview of the Problem.** As educational leaders seek to establish successful school organizations, it is important for employers to understand the various factors that affect job satisfaction. Locke (1976) defined job satisfaction as a “pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (p. 1304). Imbedded in Locke’s definition is the importance of both feeling, and thinking. Because job satisfaction is how people feel about their job and different aspects of the work (Spector, 1997), investigators have approached examining satisfaction from a needs perspective in the past, however, current satisfaction studies focus on cognitive processes.

Understanding the facets of job satisfaction in the United States is necessary for establishing productive and supportive work environments with satisfied employees. The increasing demands on industry and school organizations to educate and develop qualified workers have resulted in closely examining individual facets that affect job satisfaction.

During the last several decades of the 20<sup>th</sup> century, industrial researchers and behaviorists attempted to profile temperament types of employees and determine individual traits that lead to job satisfaction (Keirsey & Bates, 1984; Judge et al., 2009; Spector, 1997; Watson & Hillison, 1991). The Keirsey Temperament Sorter ®- II is an instrument used to profile temperament types, has dominated the personality research literature that has added understanding and will continue providing employers and school officials with structures that bring greater satisfaction to the workplace. Further, motivational theories have been identified as particular factors that should be present in jobs and lead individuals to achieve job happiness. These issues have been studied in the industry but few have been examined in an educational setting. The following information highlights the purpose of the present study and revisits the research questions

**Purpose Statement and Research Questions.** As stated in chapter one, the first purpose of this survey study was to examine the extent to which there is a relationship between job satisfaction and the temperament of doctoral candidates and graduates. A second purpose for this survey study was to examine the extent to which there is a relationship between job satisfaction and job role. The third purpose for this survey study was to examine the extent to which the relationship between job satisfaction and job role is affected by temperament. The fourth purpose of this survey study was to examine the

relationship between job satisfaction and years of service. The fifth purpose for this survey study was to examine the extent to which the relationship between job satisfaction and years of service is affected by temperament. The following section provides a review of the methodology employed in the present study to answer each of the research questions.

**Review of the Methodology.** This quantitative research was a purposive survey study comprised of 45 candidates or graduates of a Doctor of Education in Educational Leadership program from a small, private liberal arts university in a suburban setting. Candidates and graduates were members of cohorts one through nine, and were enrolled in course work between the years 2005 and 2012. Two instrument tools were used in this study; the JSS and KTS®-II. The online web-based JSS consisted of thirty-five items worded in positive and negative direction in order to measure satisfaction and responses previously collected from KTS®-II were used for data analysis and hypothesis testing. Job role and years of service were additional factors used for data analysis and hypothesis. Data from the JSS and KTS®-II were merged.

One factor ANOVAs were used to address research questions to determine a statistically significant relationship between job satisfaction, and temperament, job satisfaction and job role, and job satisfaction and years of service. Two factor ANOVAs were used to determine the relationship between satisfaction and job role, was affected by temperament. Additionally, two factor ANOVAs were used to determine the relationship between satisfaction and years of service, was affected by temperament.

**Major Findings.** The researcher investigated the extent, to which there was a relationship between job satisfaction and Keirseley temperament types. Furthermore, the



researcher examined the extent to which there was a relationship between job satisfaction and job roles, and the relationship between job satisfaction and years of service. The researcher also examined the relationship between job satisfaction and years of service for temperament. An attempt was made to test the hypothesis examining the relationship between job satisfaction and job role for temperament but issues occurred with the sample size.

Major findings from the hypothesis testing of the current study revealed mixed results. Three hypothesis tests revealed statistically significant differences between the groups. First, the hypothesis testing results revealed that stabilizer temperament types were significantly more satisfied with promotion than seeker temperament types. Second, the results of the analysis indicated Pre-K 12 administrators were significantly more satisfied with the nature of work than those that were in other job roles categories. Finally, the results of the analysis indicated there was a statistically significant relationship between job satisfaction and years of service. Teachers with 0-3 years of service were significantly more satisfied with promotion than teachers with 4+ years of service.

Six hypothesis test results revealed marginally significant differences between the groups. First, results from the hypothesis tests indicated Analyst temperament types were marginally more satisfied with coworkers than Troubleshooter temperament types. Second, Analyst temperament types were marginally more satisfied with communication than Seeker temperament types. Third, results from the hypothesis tests indicated Higher Education instructors were marginally more satisfied with pay than Pre K-12 instructors. Fourth, Higher Education instructors were marginally more satisfied with promotion than

Pre K-12 instructors. Fifth, Higher Education instructors were marginally more satisfied with supervision than Higher Education Administrators. Finally, results from the data showed teachers with 0-3 years of service were marginally more satisfied with contingent rewards than teachers with 4+ years of service.

The additional hypothesis tests revealed no relationship between job satisfaction and the Keirsey temperament types. Further, hypothesis tests revealed no relationship between job satisfaction and job role, between job satisfaction and years of service, the effect of temperament on the relationship between job satisfaction and years of service. One hypothesis test, the test for the extent to which the relationship between job satisfaction and job role was affected by temperament, could not be conducted because of sample size issues.

### **Findings Related to the Literature**

This section connects the current study's findings with previous studies related to temperament and job satisfaction. Comparing and contrasting the results of this study to the studies presented in chapter two revealed similarities and differences. Findings related to the literature include information from Saari and Judge, Spector, Furnham, Watson and Hillison, Judge and Church, Ellickson and Logsdon, Borkowski, Herzberg, Shore and Wayne, Bretz, and Judge, and Al-Zoubi.

Spector (1997), suggested that temperament traits and job satisfaction has "failed to provide significant insight into the type of traits that lead to job satisfaction." Saari and Judge (2004) argued there was a relationship between temperament and job satisfaction. Furnham et al., (2002) concurred with Spector's findings, suggesting that temperament does not have a strong or consistent influence on what employees perceive

as important in the work environment or on their levels of job satisfaction. While the overall data from the current study concur with findings from Furnham et al., (2002) and Spector (1997) results, to a certain extent support findings reporting there is a difference between job satisfaction and temperament.

Watson and Hillison (1991) examined temperament type and job satisfaction of teachers and found educators of the Troubleshooter temperament type reported the lowest satisfaction scores of the Keirsey temperaments on extrinsic and overall satisfaction (Watson & Hillison, 1991). Similar results obtained in the current study supported Watson and Hillison's findings. First, data from the current study revealed that Stabilizer temperament types were significantly more satisfied with promotional opportunities in the workplace than Seekers. Second, data results from the current study indicated Analyst temperament types were marginally more satisfied with co-workers than Troubleshooters. Third, the data indicated Analyst temperament types were marginally more satisfied with communication than Seekers.

The review of literature revealed that the nature of work is generally more important to employee satisfaction than supervision, pay, promotion, coworkers, operating procedures, communication, benefits, and contingent rewards (Judge & Church, 2000). According to Judge and Church (2000), the most significant situational influence on job satisfaction is the nature of the work. Saari & Judge (2004) also reported that one of the most recognized situational influences on job satisfaction is the nature of the work itself (p. 397).

Promotions may be offered to employees based on experience in the job, organization, and industry or job performance. Individuals promoted to senior advisory

and supervisory positions are likely to experience greater job satisfaction that leads to other extrinsic indicators of success. Ellickson and Logsdon (2002) and Spector (2007) reported that one factor, which may influence new employs to stay for a length of years is the opportunity for promotion. Additionally, Herzberg et al., (2002) findings indicate that job satisfaction is achieved when employee motivational needs are satisfied. Motivators include achievements, recognition; work itself, responsibility, promotion, and growth opportunity. Results from this study revealed that Stabilizer temperament types were significantly more satisfied with promotional opportunities in the workplace than Seekers. Furthermore, HE instructors were marginally more satisfied with promotion than Pre-K 12 instructors.

Spector (2007) described contingent rewards as recognition and gratitude for a job well done. Studies conducted in the early 20<sup>th</sup> century led researchers to discover that a number of factors increased work productivity including contingent rewards (Borkowski, 2011). Other studies suggested that one motivator which contributed to work productivity was recognition (Herzberg, et al., 2002). Results from additional studies indicate perceived organizational support creates feelings of responsibility, enhances work behavior, and is the best predictor for an employee to extend their years with the organization (Shore & Wayne, 1993). A result from the current study concurs with previous studies. A marginally significant difference in satisfaction with contingent rewards was reported based on years of service. Data revealed that on average, Pre K-12 educators with 0-3 years of service were significantly more satisfied with promotion and marginally more satisfied with contingent rewards than educators with 4+years of service.

According to the information included in the review of literature, pay is an extrinsic job satisfaction indicator, which can influence an employee's decision to stay with an organization for a length of time. Although studies have shown pay level minimally influences job satisfaction (Bretz & Judge, 1994; Spector, 1997), other studies have found a strong correlation between job satisfaction and salary (Al-Zoubi, 2012). The results from this study agree with Spector's (1997) findings that satisfaction with pay is related to job role. Results from the current study indicated there was a marginal difference in job satisfaction with pay based on job role. Individuals employed as HE instructors were marginally more satisfied with pay than Pre K-12 instructors.

### **Conclusions**

The last section of chapter five provides closure for the study. This section presents practical applications of the findings and suggestions for additional research. Further, the last section provides concluding remarks about the study.

**Implications for Action.** As stated in chapter one, it is important to understand how temperament, job satisfaction, job roles, and years of service influence who is hired, the climate in the workplace, and overall success of the organization. Implications for action based on the results of this study are that employers in school settings may be encouraged to utilize a temperament type measurement when determining the best placement for employees. Employers may consider opportunities for promotion, encourage positive relationships with co-workers, and enrich the nature of work when considering strategies for retaining productive employees that can lead to lengthening the years of service for quality employees.

**Recommendations for Future Research.** This research revealed direction for potential future studies. Replication of the study with additional cohort groups could be used to determine if any changes occurred in the perceptions of doctorate candidates' and graduates' enrolled in a small, private liberal arts university's Doctor of Educational Leadership program. This would add to the limited research on temperament style and job satisfaction among educational leaders. Examination of temperament style and level of job satisfaction among doctorate graduates who remained in the same job position after completing the leadership program would be another possible future study.

A researcher continuing the investigation could examine the relationship between temperament and job satisfaction of future doctorate candidates and graduates enrolled in a small, private liberal arts university's Doctor of Educational Leadership program. Additionally, a future study could examine the relationship between temperament and job role to determine to what extent there is an effect on job satisfaction. Finally, continuation of the study could examine the relationship between temperament and length of years of doctoral candidates and graduates in the doctor of Educational Leadership program. This would add to the limited research on talent themes and temperament's effect on job satisfaction for doctoral candidates and graduates.

Another possible study could be a mixed quantitative-qualitative study to determine the extent completion of the degree program contributed to satisfaction with job role and opportunities for career advancement. The mixed study might yield an expansion of information allowing the researcher to develop an in-depth examination on the perspective of doctorate candidates for advancing in leadership roles in various job settings that is compatible with Keirseley temperament styles. This study would add to the

research on job satisfaction as well as school leadership and temperament styles in the work place.

### **Concluding Remarks**

This study examined the relationship between job satisfaction, temperament types, job role, and years of service of doctoral candidates and graduates. It further examined job satisfaction and job role and years of service affected by temperament. Results from this study support similar findings found in current literature. For example, this research study concurs to some extent, with findings that showed statistically significant and marginally significant relationships between job satisfaction and temperament types. There were also statistically significant and marginally significant findings between job satisfaction and job roles for different educational groups. This study reported statistically significant and marginally significant findings between job satisfaction and years of service for different educational groups. Results from the current study also indicated no relationship between satisfaction, job role, and years of service affected by temperament.

Consideration to examine the extent to which there is a relationship between job satisfaction and job role affected by temperament could be continued in future studies. Furthermore, consideration for examining the extent to which there is a relationship between job satisfaction and years of service affected by temperament may provide a contribution to current job satisfaction and dispositional studies. It will be vital to continue this research in determining the effect temperament has on job satisfaction with pay, promotion, supervision, benefits, contingent rewards, operating procedure, co-

workers, the nature of work, and communication and overall satisfaction with candidates and graduates from additional cohorts.



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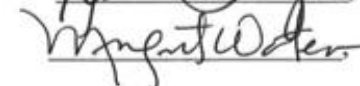
## Appendices





**Appendix A**

**IRB Form**

**I. Research Investigator(s)** (Students must list faculty sponsor first)Department(s) School of Education Graduate Department

Name	Signature	
1. Dr. Harold Frye		Major Advisor
2. Margaret Waterman		Research Analyst
3. Dr. Lowell Ghosey		University Committee Member
4. Dr. Jerry Abbott		External Committee Member

Principal Investigator: Pamela S. Turner  
 Phone: 913-825-4928  
 Email:   
 Mailing address: 5642 Cottonwood Dr.  
 Shawnee, KS 66216

Faculty sponsor: Dr. Harold Frye, EdD  
 Phone: 913-344-1220  
 Email: 

Expected Category of Review: \_\_ Exempt  X  Expedited \_\_ Full

**II: Protocol: (Type the title of your study)**

Temperament Types, Job Satisfaction, Job Roles, and Tenure Among Doctor of Educational Leadership Candidates and Graduates

████████ University Institutional Review Board

Thursday, September 11, 2014

Dear Pam Turner and Dr. Frye

The ██████████ University Institutional Review Board (IRB) reviewed the research proposal under Expedited Status Review.

After review, the IRB **approves** the protocol with the following **contingencies**:

1. Subjects will need to be notified that participation in full, or in part, is completely voluntary with the option of not answering any question or discontinuing participation at any time without penalty or loss of benefits to which the subject is otherwise entitled. It was indicated in the submission to occur, but was not clearly found in the submitted copy.

Work on the project may begin with the above concern addressed and reviewed by the IRB. When revisions have been completed, please send an updated copy of the research protocol for our review.

If you have any questions about the IRB's decision, please contact me at 785-594-8440. Thank you for submitting this research proposal to the Baker University IRB.

Sincerely,

Chris Todden EdD  
Chair, ██████████ University IRB

████████ University IRB Committee  
Verneda Edwards EdD  
Sara Crump PhD  
Molly Anderson  
Scott Crenshaw

### **Summary**

**In a sentence or two, please describe the background and purpose of the research.**

Interest in the typological approach to determining personality effect has produced vast bodies of research (Myers & Myers, 1991; Keirsey, 1998). Studies examining the Jungian personality types, Myers-Briggs Type Indicator (MBTI), and Keirsey Temperament model have provided limited evidence to suggest individuals who choose work environments and job roles in keeping with their temperament type are generally satisfied in the workplace and career choice (Keirsey & Bates, 1984; Judge, Hulin, & Dalal, 2009; Spector, 1997; Watson & Hillison, 1991).

**Briefly describe each condition or manipulation to be included within the study.**

There will be no manipulations made for this study.

**What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.**

**Will the subjects encounter the risk of psychological, social, physical or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.**

This study will use the Job Satisfaction Survey (JSS) designed by Paul E. Spector, (1994) to assess the relationship between temperament type of doctoral candidates and graduates and level of job satisfaction. The JSS was designed to assess nine facets of job and overall satisfaction. Nine facets are addressed on the 36 item questionnaire. Facets include pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. The design for the 36 item survey uses a summated rating scale format, which is one of the most popular indicators for job satisfaction (Spector, 1997). The Keirsey Temperament Sorter®- II (KTS®-II) was an additional instrument used to measure the temperament type of Doctor of Educational Leadership candidates and graduates. The Keirsey Temperament Sorter®- II was developed by David Keirsey to assess individual personality type. (Keirsey, 1998) separates the sixteen personality types into four well-defined temperament groups based on the group's dominate pair. The self-administered standardized questionnaire consists of 70 items with two possible responses. The test is designed to measure the respondent's personality type based on the temperament archetypes of Jung (Keirsey, 1998). Questions related to demographics were also be answered by doctoral graduates and candidates.

The subjects will not encounter any psychological, social, physical, or legal risk in this study.

**Will any stress to subjects be involved? If so, please describe.**

No stress to the subjects will be involved.

**Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.**

Subjects will not be deceived or misled in any way.

**Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.**

There will not be a request for information, which subjects might consider personal or sensitive in order to conduct this study.

**Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.**

No materials will be presented to subjects that could be considered offensive, threatening, or degrading.

**Approximately how much time will be demanded of each subject?**

The online data-based Job Satisfaction Survey will take approximately 15-20 minutes to complete. The Keirseley Temperament Sorter®- II was a course work assignment and required no further assessment.

**Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.**

The subjects in this study are doctoral candidates and graduates from a small liberal arts university. No oral solicitation will be conducted.

Outline of Script:

1. Introduction
2. Explanation of Topic and purpose of the study
3. Explanation for why this study is significant
4. Research questions to be studied
5. Rating procedure for the Job Satisfaction Survey
6. Confidentiality and anonymity assurance
7. Contact information

**What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?**

To ensure that each subject's participation is voluntary, an email will be sent to all candidates and graduates in cohorts 1-9 inviting them to participate in the survey study. No additional participation will be necessary for this study. Subjects will give their voluntary consent by choosing to respond to and completing the online surveys.

No inducements will be offered to the subjects for their participation.

**How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.**

There will not be a written consent form used. Subjects will be invited to voluntarily participate or not participate in the study. By the act of participating in the study, the subjects will give their consent to be part of the study.

**Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.**

No aspect of the data will be a part of any permanent record that could be identified with the subject.

**Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher or employer? If so, explain.**

The decision to participate or decline participating in a specific experiment or study will not be part of any permanent record available to a supervisor, teacher, or employer.

**What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with it after the study is completed?**

The responses of doctoral candidates and graduates will be kept in the strictest confidentiality. Information obtained from candidates and graduates will remain confidential, and the reporting of the results will be by group analysis only. No names will be used in any reporting of results. Data will be stored until the results of the data have been tabulated and reported in Chapter Four of the study. Data will be kept in the researcher's personal file and remain the property of the researcher. Data will be completely destroyed three years from the conclusion of the study and will not be used in any further study without the knowledge and consent of candidates and graduates themselves.

**If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?**

There are no risks involved in the study.

**Will any data from files or archival data be used? If so, please**

Archival data used in this survey study includes the Keirse/Myers-Briggs/Jung Typology results that were made available to the researcher. All names associated with participants and included in data from The Job Satisfaction Survey will be removed by an independent source not associated with any individual prior to files becoming available to the researcher to protect the privacy of all participants for this study. None of the collected data will be stored or shared with anyone once the study is completed.

**Appendix B**

**Permission to Conduct Study**

**E: Information re: JSS for dissertation study**

Spector, Paul [pspector@usf.edu]

Dear Pamela:

You have my permission to use the JSS in your research. You can find copies of the scale in the original English and several other languages, as well as details about the scale's development and norms. I allow free use for noncommercial research and teaching purposes in return for sharing of results. This includes student theses and dissertations, as well as other student research projects. Copies of the scale can be reproduced in a thesis or dissertation as long as the copyright notice is included, "Copyright Paul E. Spector 1994, All rights reserved." Results can be shared by providing an e-copy of a published or unpublished research report (e.g., a dissertation). You also have permission to translate the JSS into another language under the same conditions in addition to sharing a copy of the translation with me. Be sure to include the copyright statement, as well as credit the person who did the translation with the year.

You are welcome to use the scale in a web-based or other electronic form.

Thank you for your interest in the JSS, and good luck with your research.

Best,

Paul Spector  
Department of Psychology  
PCD 4118  
University of South Florida  
Tampa, FL 33620  
813-974-0357  
pspector [at symbol] usf.edu <http://shell.cas.usf.edu/~spector>



**Appendix C**  
**Welcome Letter**

## Welcome

My name is Pamela Turner and I am a member of Cohort #6 in the Doctor of Education Leadership Program at [REDACTED] University at the [REDACTED] campus. I am currently in the process of conducting research for my dissertation, which is designed to examine the relationship between Keirsey temperament types, job satisfaction, job roles, and years of service of Doctor of Educational Leadership candidates and graduates. In an effort to collect data for this survey, your last name and first initial are necessary to create an identification number. Please be assured that all personal information obtained from respondents will remain anonymous. In order to protect your anonymity, the names of participants will be removed. An independent source not associated with the study will remove all names prior to files becoming available to the researcher. None of the collected data will be stored or shared with anyone once the study is completed. Participation in this survey is strictly voluntary. Voluntary participation includes full, partial, or rejection of any survey items without consequence.

To provide information for the research study, one response will require knowledge of your Keirsey temperament type. Information regarding temperament identification was required by Dr. Harold Frye in course work either during Colloquium I or in DED 9001 Collaborative Leadership in Community Context.

As an educator, I understand the value of your time. It is in this spirit, that I appreciate you taking a few minutes to respond to the survey. Thank you.

Sincerely,

## **Appendix D**

### **Demographic and Job Satisfaction Surveys**

## Section A

My last name and first initial

**2. Cohort Number**

- 1-9  
 10-20

**3. My Keirsey type**

- Troubleshooter (ESTP, ISFP, ISTP, ESFP)  
 Stabilizer (ESTJ, ISFJ, ISTJ, ESFJ)  
 Seeker (ENFJ, INFJ, INFP, ENFP)  
 Analyst (ENTJ, INTJ, ENTP, INTP)

**4. Number of years in my current position.**

Number of years in my current position.

**5. My current job role**

- My current job role Pre K-12 Educator  
 Pre K-12 Administrator  
 Higher Education Instructor  
 Higher Education Administrator  
 Other (please specify below)

Other

Next

## Section B

**6. I feel I am being paid a fair amount for the work I do.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**7. There is really too little chance for promotion on my job.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**8. My supervisor is quite competent in doing his/her job.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**9. I am not satisfied with the benefits I receive.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**10. When I do a good job, I receive the recognition for it that I should receive.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**11. Many of our rules and procedures make doing a good job difficult.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**12. I sometimes feel my job is meaningless.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**13. I like the people I work with.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**14. Communications seem good within this organization.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**15. Raises are too few and far between.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**16. Those who do well on the job stand a fair chance of being promoted.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**17. My supervisor is unfair to me.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**18. The benefits we receive are as good as most other organizations offer.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**19. I do not feel that the work I do is appreciated.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**20. My efforts to do a good job are seldom blocked by red tape.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**21. I find I have to work harder at my job because of the incompetence of people I work with.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**22. I like doing the things I do at work.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**23. The goals of this organization are not clear to me.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**24. I feel unappreciated by the organization when I think about what they pay me.**

Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**25. People get ahead as fast here as they do in other places.**

Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**26. My supervisor shows too little interest in the feelings of subordinates.**

Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**27. The benefit package we have is equitable.**

Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**28. There are few rewards for those who work here.**

Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**29. I have too much to do at work.**

Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much



**30. I enjoy my coworkers.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**31. I often feel that I do not know what is going on with the organization.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**32. I feel a sense of pride in doing my job.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**33. There are benefits we do not have which we should have.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**34. I like my supervisor.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**35. I have too much paperwork.**

- Disagree very much     Disagree moderately     Disagree slightly     Agree slightly     Agree moderately     Agree very much

**Appendix E**  
**Graphic Organizer**

Table E1

*Graphic Organizer of Hypothesis Testing Results*

RQ	<i>p</i>	Findings
Statistically Significant Difference		
RQ 1 2	0.010	satisfaction w/promotion - average for stabilizers was significantly higher than for seekers
RQ 2 8	0.010	satisfaction w/nature of work -average for Pre-K-12 administrators was significantly higher than for other educators
RQ 4 2	0.045	satisfaction w/promotion - average for teachers w/ 0-3 years was higher than for teachers w/4+ years
Marginally Significant Difference		
RQ 1 7	0.100	satisfaction w/co-workers - average for analysts was higher than for troubleshooters.
RQ 2 1	0.070	satisfaction w/pay - average for higher education instructors was higher than for Pre-K-12 instructors.
RQ 2 2	0.070	satisfaction w/promotion - average for higher education instructors was higher than for Pre-K-12 instructors.
RQ 2 3	0.073	satisfaction w/supervision - average for higher education instructors was higher than for higher education administrators
RQ 1 9	0.050	satisfaction w/communication - average for analysts was higher than for seekers
RQ 4 5	0.050	satisfaction w/contingent rewards - average for teachers w/0-3 years was higher than for teachers w/ 4+years
No Significant Difference		
RQ 1 1	0.330	no significant difference
RQ 1 3	0.210	no significant difference
RQ 1 4	0.140	no significant difference
RQ 1 5	0.500	no significant difference
RQ 1 6	0.840	no significant difference

RQ 1 8	0.330	no significant difference
RQ 1 9	0.200	no significant difference
RQ 1 10	0.200	no significant difference
RQ 2 4	0.116	no significant difference
RQ 2 5	0.306	no significant difference
RQ 2 6	0.150	no significant difference
RQ 2 7	0.612	no significant difference
RQ 2 9	0.602	no significant difference
RQ 2 10	0.145	no significant difference
RQ 4 1	0.790	no significant difference
RQ 4 3	0.438	no significant difference
RQ 4 4	0.440	no significant difference
RQ 4 6	0.110	no significant difference
RQ 4 7	0.310	no significant difference
RQ 4 8	0.840	no significant difference
RQ 4 9	0.330	no significant difference
RQ 4 10	0.130	no significant difference
RQ 5 1	0.990	no significant difference
RQ 5 2	0.950	no significant difference
RQ 5 3	0.720	no significant difference
RQ 5 4	0.920	no significant difference

RQ 5 5	0.400	no significant difference
RQ 5 6	0.550	no significant difference
RQ 5 7	0.940	no significant difference
RQ 5 8	0.790	no significant difference
RQ 5 9	0.180	no significant difference
RQ 5 10	0.730	no significant difference
RQ3		no tests

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