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Teacher Job Satisfaction Among K-12 Public School Teachers: A Mixed Methods Study

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Teacher Job Satisfaction Among K-12 Public School Teachers:

A Mixed Methods Study

by

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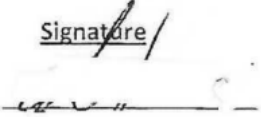Educational Studies

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ABSTRACT

Sadly, teacher job satisfaction has been recently depicted as a "portrait of broad teacher discontent" (Phi Delta Kappa, 2019, p. k3), negatively impacting teachers' well-being and retention. This study employed a mixed-methodological approach, composed of (a) an exploratory factor analysis of participant responses to the Teacher Job Satisfaction Questionnaire (Lester, 1982), (b) two open-ended questions, and (c) the covariates of the participants. Participants were K-12 public teachers ($n = 129$), employed in Ulster, Dutchess, Orange, Rockland, and Putnam counties of New York State. Through exploratory factor analysis, this study discovered six factors of teacher job satisfaction: Supportive and Appreciative Supervisor (F1), Collegiality and Workplace Relationships (F2), Income and Job Security (F3), Autonomy, Creativity at Work, and Student Relationship (F4), Working Conditions and School Culture (F5), and Advancement and Professional Growth (F6). Qualitative responses, what teachers *were* and *were not satisfied* with in their jobs, augmented the exploratory factor analysis findings. A table of descriptive statistics and histograms were created, prompted by the exceptionality of F2, and a t-test indicated that females who shared views with F2 had more concerns than males over relationships with colleagues (20% at -3.0 *SD*), when working in schools. This study concluded six factors of teacher job satisfaction, where relationships emerged as the strongest indicator, especially among females. Recruiting, developing, rewarding, and retaining effective administrators, and creating nurturing work environments for teachers, can positively impact teacher job satisfaction, wellness, and retention.

Keywords: teacher job satisfaction, teacher working conditions, teacher job dissatisfaction, school culture, relationships in schools

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CHAPTER 1: INTRODUCTION

Background

The plight of American teachers was recently described in grim terms; widespread teacher discontent, educators weary of the task, and waning job satisfaction; placing at risk the well-being of teachers, students, and their collective educational system(s) (Phi Delta Kappa, 2019; Toropova et al., 2021). With a potential wave of teachers exhibiting low job satisfaction, both (a) identifying the factors contributing to such and (b) implementing efficacious remedies become of utmost import, whereas inaction prophetically foretells a dismal educational destiny as a society.

Hence, this study seeks to describe the factors that impact teacher job satisfaction, influencing teacher well-being, and the tendency to remain in the field (i.e., retention) or to leave (i.e., attrition). This research, and topic in general, are salient as education is the cornerstone of our society, rendering educators the human capital of such and beckoning stakeholders to action.

Teacher Job Satisfaction

Job satisfaction is a difficult concept to define, inextricably linked to multiple variables, and where a valid measure of such is somewhat elusive (Aldridge & Fraser, 2016; Skaalvik & Skaalvik, 2009). Succinctly, job satisfaction describes an affective reaction based on an evaluative judgment that one forms about a job (Brief & Weiss, 2002; Weiss, 1999).

Factors of Teacher Job Satisfaction

Teacher job satisfaction is closely associated with numerous interrelated factors, and for purposes of this study are organized by: pay, security, colleagues, working conditions, supervision, advancement, recognition, responsibility, and the work itself (Lester, 1984).

The workplace, or organization, is a bifurcated environment of influence exerted by the worker upon the organization and the organization upon the worker. An organization affects workers' "thoughts, feelings, and actions in the workplace and away from it" while the workers wield the same influential power upon the organization (Brief & Weiss, 2002, p. 280). Workplace environment envelopes the most commonly reported, strongest predictors of teacher job satisfaction, namely: "teacher autonomy, administrative support and leadership, and staff collegiality" (García Torres, 2018, p. 130; see also Johnson et al., 2012; Ma & MacMillan, 1999; Shen et al., 2012; Skaalvik & Skaalvik, 2009; Stockard & Lehman, 2004; Tickle et al., 2011).

Teacher job satisfaction manifests in a myriad of ways, whereas it is inversely correlated with general absenteeism (Hanebuth, 2008; Pepe et al., 2017), injury-related employee absence (Drakopoulos & Grimani, 2013), resolve to depart one's workplace (MacIntosh & Doherty, 2010; Tschopp et al., 2014), deleterious behavior(s) of both interpersonal and organizational type (Mount et al., 2006), work-related stressors (Boudreaux et al., 1997; Skaalvik & Skaalvik, 2015), psychological anguish (Moen et al., 2013) and physiological indicators of poor health or malady such as "higher levels of inflammatory cytokines and other lymphocytes" (Pepe et al., 2017, p. 397; see also Amati et al., 2010).

Teacher job satisfaction and teacher retention share numerous factors that impact teachers who remain in the field, which follow situational, professional, and personal factors (Day et al., 2007; Grissom & Bartanen, 2018; Holme et al., 2018; Madero, 2019; Richards et al., 2018; Sammons et al., 2007). Teacher job satisfaction has its roots in extrinsic and intrinsic motivational elements of the educational system. Teaching salary, school safety, perceived support from leaders, school culture, and school resources are the primary elements of

motivation; however, intrinsic elements such as instructional activities and autonomy were influences as well (Gkolia et al., 2014; Madero, 2019; Ouyang & Paprock, 2006).

Factors of job satisfaction that impact teachers exiting the field are distilled to the following: dissatisfaction, personal/family reasons, retirement, to pursue another job, and financial reasons (Sutcher et al., 2016; Figure 1).

Figure 1

Reasons Teachers Have Conceded Leaving the Profession
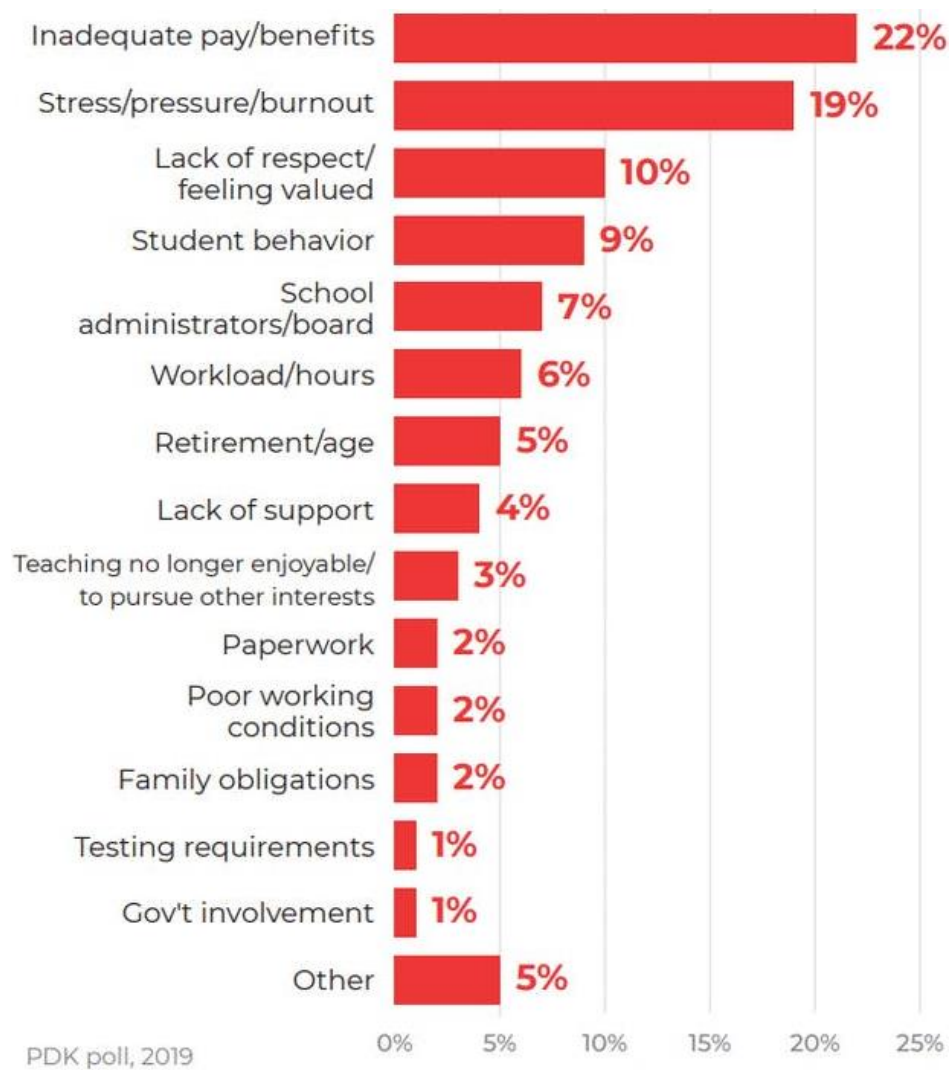
Source. (PDK, 2019, p. k7).

Alarmingly, "half of teachers . . . seriously considered leaving the profession in recent years," citing general dissatisfaction among teachers, inadequate pay and benefits, stress, burnout, lack of respect, conflict with school administrators and boards of education, workload, poor working conditions, and more (PDK, 2019, p. k7). The culmination of teacher retention data indicates the most documented and consistent measure of U.S. teacher retention is impacted by working conditions, inclusive of leadership, and incorporating factors such as access to a shared decision-making model, self-autonomy, a supportive and collaborative work environment, and the quality of administration and leadership (Borman & Dowling, 2008; Boyd et al., 2011; Brown & Wynn, 2009; García Torres, 2018; Horng et al., 2010; Ingersoll, 2003; Toropova et al., 2021; Weiss, 1999).

Leadership style impacts teacher retention, as successful principals develop efficacious approaches to leadership; approaches that enable the administrator to successfully lead, often censoring fruitless arguments to concentrate instead on core values of empathetic support, social justice, a committed work ethic, a sense of humor (Mulford & Johns, 2004), and an urgency to both illuminate and initiate corrective actions to combat declining teacher morale (Noddings, 2014). The fruits of leadership efficacy are many; however, the retention of effective, proficient teachers is critical (Battle & Looney, 2014; Grissom & Bartanen, 2018; Madero, 2019), and consistency of staff creates a seamless coherence to learning (Ronfeldt et al., 2013).

Teacher job satisfaction is a prevalent theme pondered among those exiting the field. In a recent study, the primary reasons cited by teachers for leaving the profession were personal reasons (37%), to pursue other employment (28%), dissatisfaction with assessment policies (25%), and dissatisfaction with leadership or teaching as a career (21%) (Learning Policy Institute, 2017; see Figure 1). Several factors may contribute to this trend, and research suggests

"declining morale and job satisfaction among current teachers may contribute to the decrease in individuals pursuing teaching as a career" (Learning Policy Institute, 2017, p. 2).

Additionally, over half of teachers describe a workplace of inordinate stress, wherein budget decreases have led to plummeting morale ("MetLife survey of the American teacher," 2013). The long-standing practice of time and grade promotes a "last hired, first fired" practice that many districts follow for staff reductions due to budget cuts, which may deter fledgling education students from accomplishing budding teacher aspirations (Gordon, 2011). Typically, seniority is defined by a district's collective bargaining agreement or contract, and some non-instructional staff may be governed by civil service rules. On the shortlist describing why teachers leave are the following: general teacher "dissatisfaction, family and/or personal reasons, retirement, to pursue another job, and financial reasons" (Sutcher et al., 2016, p. 49).

Not surprisingly, teachers with low job satisfaction are more likely to leave their positions. Teachers reported job satisfaction is the number one influencer of retention-based decisions, with workplace environments significantly correlated with retention and job satisfaction (Harvey, 2014; Stockard & Lehman, 2004). This is part of a growing trend, where 62% of teachers reported themselves as "very satisfied" with their vocation as recently as the 1980s and 1990s. However, a mere 39% of teachers felt very satisfied in 2013, the lowest level in 25 years ("MetLife survey of the American teacher," 2013). Salary is but one factor, albeit a significant one affecting both teacher recruitment and teacher retention (Geiger & Pivovarova, 2018, p. 607; see also Auguste et al., 2010; Dolton & Van der Klaauw, 1999; Hargreaves, 2009; Hargreaves et al., 2007; Smethem, 2007). Clearly, teacher job satisfaction is waning, indicated by a subsequent exodus of teachers from the workforce, negatively impacting our educational system(s) and creating the impetus for this study.

Teacher Retention and Potential Shortages

The pool of highly qualified teachers has been described as a "leaky bucket" (Learning Policy Institute, 2017 p. 1). Succinctly, the research indicates that the teacher shortage is "real, large and growing, and worse than we thought" (García & Weiss, 2019, p. 1). Interestingly, many attribute teacher attrition to a generally aging workforce. However, according to national estimates, attrition often occurs during the early portion of the educators' odyssey, where fledgling educators exit at a rate "between 19% and 30% over their first five years of teaching" (Sutcher et al., 2016, p. 42), and worldwide estimates of teacher attrition approach 50% within the first five years of service (Madigan & Kim, 2021; Sims & Jerrim, 2020).

Teachers who voluntarily left positions most commonly attribute such to dissatisfaction, namely concerns with school leadership (33%), exclusion from decision-making (29%), and work environment, including infrastructure and resources (27%) (Carver-Thomas & Darling-Hammond, 2017, p. 6; see also MacDonald, 1999; McCarthy et al., 2010). Additionally, teachers separately cited financial reasons (27%) for exiting the field (Carver-Thomas & Darling-Hammond, 2017). Therefore, the study of teacher job satisfaction is of urgent concern, as a staggering percentage of teachers, 25% of the U.S. teacher workforce, exits the field prior to reaching the third year; averaging 8% annually (Carver-Thomas & Darling-Hammond, 2017, p. 1; see also Madero, 2019; Skaalvik & Skaalvik, 2011).

These data are correlated with a potential teacher shortage. To that end, predictive data from the U.S. Department of Education estimated demand for new teacher hires will exceed 300,000 for the first time, beginning in or about 2021 (Sutcher et al., 2016). Moreover, an educator dearth negatively impacts students and teachers, imprudently consuming precious

resources on both recruiting and training new teachers when limited funds could be better allocated elsewhere (García & Weiss, 2019, pp. 2-3).

Teacher shortage trends appear recent, within the decade, as 15% of 2011-2012 public school year teachers "either transitioned schools or left the profession entirely," doubling between 1990 and 2013 (Geiger & Pivovarova, 2018, p. 605; see also Goldring et al., 2014). Location seems to impact teacher job satisfaction as well, where 60% of teachers in the Northeastern United States believed they were fairly remunerated, while only 30% of their Southern and Midwestern counterparts felt similarly, with 47% of the West feeling fairly remunerated (Phi Delta Kappa, 2019).

However, teacher attrition factors involve more than just salary, including "unsupportive work environments and poor school leadership among factors affecting" teachers' desires to leave (Geiger & Pivovarova, 2018, p. 609). Moreover, teacher attrition appears universal, although occurring at different rates and amid varied contexts, namely "prestige, working conditions, and salary" (Geiger & Pivovarova, 2018, p. 608).

Educational Funding

Funding is one key variable impacting teacher employment, as in Oregon, where nearly three-quarters of teacher education graduates (2009-2014) were unable to attain employment as teachers due to reduced school funding; funding reductions, which caused hiring freezes; loss of positions; and dissuading potential teaching candidates (U.S. Department of Education, 2015).

Similarly, New York State's economic downturn of 2008 led to a substantial decrease in school funding within the state, threatening educational programming and staffing. Teacher cuts remained from 2009-2013, negatively impacting the economy and projecting the same into the

future, as fewer students enrolled in teacher preparation programs during this time (U.S.

Department of Education, 2015).

Declined Enrollments in Teacher Preparation Programs

Low teacher job satisfaction correlates with fewer entries into the educational field (i.e.,

those studying to become teachers), potentially producing a shortage. Therefore, one predictive

measure of staffing trends is that of our teacher preparation programs, where enrollment has

decreased recently (Gordon, 2011; Sobota & Coulter, 2013). Enrollments in teacher preparation

programs differ by state, where most have seen decreases of 50% since academic year (AY)

2008-09. Three states stand out as possessing the most numerous enrollments, Texas (84,722),

New York (39,236), and California (24,954; U.S. Department of Education, 2019). New York

State has decreased by about 50%, with 74,344 teacher preparation enrollments in AY 2008-

2009, falling to 37,080 in AY 2016-17 (U.S. Department of Education, 2019), but recently

rebounding slightly to 50,116 in AY 2018-19 (U.S. Department of Education, 2020), the most

current data available. Nationally, the decline began AY 2008-09, reported as 719,081 students,

drastically declining to 499,800 students in AY 2012-13 (U.S. Department of Education, 2015).

As teacher preparation program students declined again for AY 2014, this trend continued to

451,155 students, and subsequent reports indicate a decline to 444,244 students in the 2018

report, based on AY 2016-2017 (Sutcher et al., 2016).

Nationwide, the number of students enrolled in teacher preparation programs has

declined by more than 30% (National Center for Education Statistics) amid a simultaneous

increase in non-teacher preparation bachelor degree programs (National Center for Education

Statistics, 2021). This represents an estimated 340,000 fewer teacher preparation program

students in 2016-17, compared with academic year 2008-09 (U.S. Department of Education,

2020; see also Partelow et al., 2017).

Although the data indicate a decline in teacher preparation program enrollments, the

students enrolled in postsecondary education, in general, only declined by 3% during the same

timeframe (U.S. Department of Education, 2015, p. 6). In analyzing such a disparity, the U.S.

Department of Education (2015) reported, "16% fewer high school students over the past four

years say they are pursuing a career in teaching" (p. 6).

Teacher Attrition and Retention

A seemingly pedestrian, innocuous academic exercise in educator statistics (normal

attrition) warns that the retention of secondary teachers, particularly those teaching among

underrepresented groups, is decreasing to the point of a "global phenomenon" (Madero, 2019).

The United States has an annual teacher attrition rate of 8%, where 66% of teachers leave for

reasons other than retirement (Carver-Thomas & Darling-Hammond, 2017).

Globally, a worldwide exodus from teaching is unfolding (Geiger & Pivovarova, 2018)

due to the following stated educational woes: low salaries (Ingersoll, 2001; Mertler, 2016;

Smith & Ingersoll, 2004; Wynn et al., 2007), poor working conditions (Elfers et al., 2006;

Ingersoll, 2003), quality of teacher preparation programs (Goldhaber & Cowan, 2014;

Goldhaber et al., 2016; Ronfeldt & Reininger, 2012), and overwhelming workload (Hakanen et

al., 2006; Ingersoll et al., 2012). An increasing teacher turnover rate and a potential shortage of

qualified teachers remains a growing concern internationally (European Commission, 2018;

Ingersoll et al., 2017; Toropova et al., 2021).

Teacher attrition contributes to both an international shortage (Geiger & Pivovarova,

2018; MacDonald, 1999) and a domestic shortage (Ingersoll, 2001; Smith & Ingersoll, 2004;

Sutcher et al., 2016), whereas the lowest international impact of attrition occurred in Singapore,

Finland, and Ontario, Canada, averaging 3 to 4% annually (Geiger & Pivovarova, 2018, p. 604;

see also Sutcher et al., 2016). Meanwhile, staggering attrition rates are reported in the United

Kingdom, where government figures revealed 30% of newly hired teachers leave the profession

within the first five years (Geiger & Pivovarova, 2018; Weale, 2016).

A sobering percentage of the U.S. teacher workforce (25%) exits the field prior to

reaching the third year, and 40% by their fifth year (Skaalvik & Skaalvik, 2011, p. 1029; see

also Madero, 2019). Annually, U.S. teachers leave at an 8% rate and transfer at the same 8%

rate, all while job satisfaction predicts this exodus (Carver-Thomas & Darling-Hammond, 2017,

p. 4; see also MacDonald, 1999; McCarthy et al., 2010). The correlation to these data is the

concept of a potential teacher shortage (Figure 2).

Figure 2

Estimated New Teacher Hires Demanded
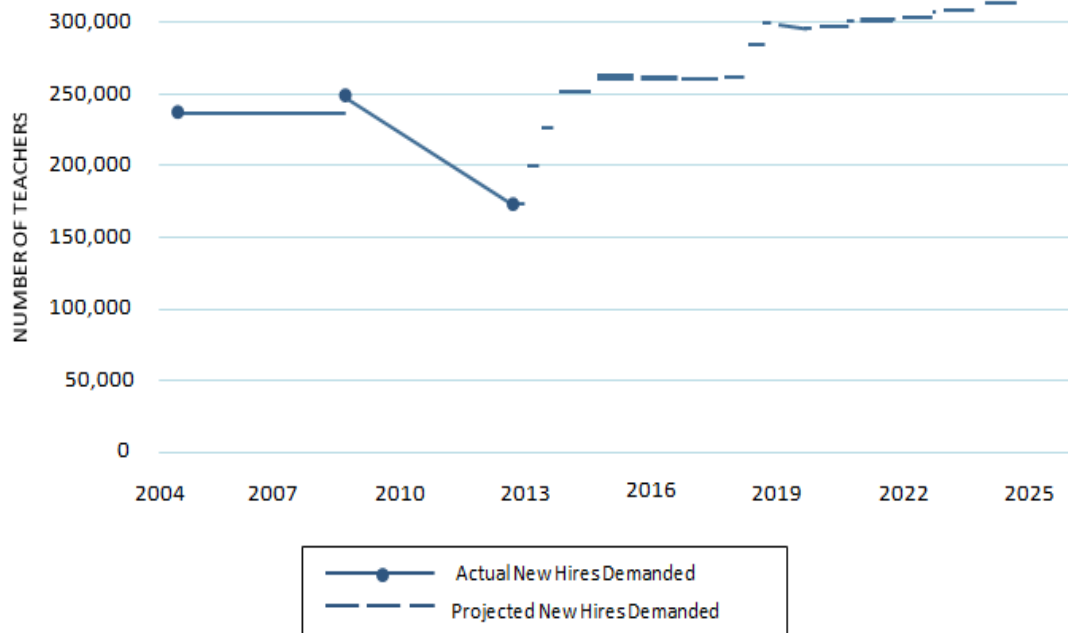
Note. Data for teachers are expressed in full-time equivalents.
Source. U.S. Department of Education, multiple databases.

To that end, predictive data from the U.S. Department of Education estimated demand for new teacher hires will exceed 300,000 for the first time, beginning in or about 2021 (Sutcher et al., 2016, p. 21; Figure 2).

Benefits of the Study

With a potential wave of teachers exhibiting low job satisfaction, (a) identifying the contributing factors of teacher job satisfaction and (b) implementing efficacious remedies become of utmost importance. The absence of such prophetically foretells our educational destiny(ies) as a society and identifies the major categories of research addressed in this study: (a) teacher job satisfaction and (b) teacher retention. The two are closely related, as low teacher job satisfaction is one predictor of teacher attrition, and job dissatisfaction is related to leaving the teaching profession (Carver-Thomas & Darling-Hammond, 2017; MacDonald, 1999; McCarthy et al., 2010). Therefore, the study of teacher job satisfaction is of urgent concern; a quarter of teachers in the United States leave prior to their third year of service, an annual attrition rate of 8% (Madero, 2019; Skaalvik & Skaalvik, 2011).

There exists a collective warning of educator disharmony and consequential dearth, where 50% of teachers recently contemplated exiting the educational field (PDK, 2019), and the U.S. Department of Education has estimated demand for new teacher hires will exceed 300,000 for the first time beginning in or about 2021(Sutcher et al., 2016). Therefore, educational stakeholders are behooved to act, wielding multiple imperatives to research, identify, and mitigate the factors of teacher job satisfaction; prerequisites to preserve and advance the educational system at large. In addition to escaping such potential shortages, education and its component stakeholders (i.e., teachers, administrators, and students) must be safeguarded as an integral foundation of society, one long-held in highest regard. At its pinnacle, education

exceeds a purely academic exercise, hinting of psychological self-actualization and impassioned

lives, as the poet Yeats (n.d.) is credited as penning, "Education is not the filling of a pail, but

the lighting of a fire" (para. 1). Education is not merely a mindful, academic endeavor

according to Noah Webster (n.d.), but an establishment of character and integrity, and infusing

a religious lens he posited, "The heart should be cultivated with more assiduity than the head"

adding, "Education is useless without the Bible" (Webster, n.d., p. 1).

Research empowers educators to effect change, whereas teacher job satisfaction data

endue insights reflecting many aspects of teaching, nuances of the workplace or school in which

such occurs, and the subtleties of individual motivation. Teacher job satisfaction also reflects an

educator's proclivity to exit the profession (Malinen & Savolainen, 2016; Skaalvik & Skaalvik,

2011) and reflects burnout (Skaalvik & Skaalvik, 2009) as correlated with job stress (Klassen et

al., 2010). More specifically, teacher job satisfaction is inversely related to job-related stress

(Boudreaux et al., 1997; Pepe et al., 2017), psychological distress (Moen et al., 2013), and

absenteeism (Hanebuth, 2008), particularly when absenteeism is due to injury (Drakopoulos &

Grimani, 2013).

Determining educational trends through teacher job satisfaction may help predict and

prepare for the collective educational future. However, the results also provide critical quality of

life and work data regarding present-day educators. Teacher retention and attrition indicators

provide predictive educational staffing data, and one such metric, the MetLife Survey of the

American Teacher: Challenges for School Leadership (2013), is a longitudinal study spanning

over two decades. Troubling trends were identified, including the assertion that teacher job

satisfaction has plummeted, declining to its lowest in "25 years and has dropped five percentage

points in the past year alone, from 44% to 39% very satisfied" (Markow et al., 2013, p. 45).

Teacher job satisfaction is of particular importance when considering secondary factors such as the location, funding, and demographic makeup of a school. Such research is critical as possibly predicting the retention rates of teachers, especially educators working in less affluent schools with "higher percentages of minority . . . students" (p. 608), specifically in urban areas (see also Elfers et al., 2006; Hanushek et al., 2004; Ingersoll, 2001, 2003) where teachers were up to "50% less likely to be retained (either due to their contracts not being renewed or voluntarily leaving)" (Geiger & Pivovarova, 2018, p. 608; see also Ingersoll, 2003). Socioeconomic status (SES) is another metric utilized here and measured via a combination of "education, income, and occupation" (American Psychological Association, 2020).

Moreover, teacher job satisfaction is well-deserving of study as academic content areas such as science, mathematics, and special education are deemed high turnover areas, where teachers are retained less frequently than other subject area teachers. Elementary-level teachers are "more likely to stay" than their counterparts (Geiger & Pivovarova, 2018, p. 608). Unfortunately, an effective teacher's untimely departure from employment has unintended consequences and may even cause conflict for some to remain in the employ of an educational institution while under duress. Other educational stakeholders can also be impacted as an increase in teacher turnover negatively impacts student academic achievement (García Torres, 2018, p. 127; see also Ronfeldt et al., 2013). Moreover, an educator dearth "harms students, teachers, and the public education system as a whole," threatening students' ability to learn, impeding teacher efficacy, and creating an imprudent economic redistribution of educational resources (García & Weiss, 2019, p. 1).

Given data on teacher shortages, it is incumbent upon policymakers to embrace this possibility and look to teacher recruitment and retention as a priority. Salary, loan forgiveness,

and other incentives have been utilized with some success in impacting teacher recruitment and retention. However, teacher job satisfaction must be considered. In fact, 85% of Americans polled identified the attraction and retention of good teachers as their highest priority for the federal government in this election year (PDK, 2020, pp. k5-k6).

In addition to predicting teacher retention, researching teacher job satisfaction also identifies key factors associated with our educators' well-being and correlated with such negative effects as burnout (Skaalvik & Skaalvik, 2009) and job stress (Klassen et al., 2010). As teacher job satisfaction is inherently linked to retention and job dissatisfaction linked to an exodus, it is critical to identify and examine factors related to job satisfaction (Aldridge & Fraser, 2016; Gersten et al., 2001).

Such research and identification are necessary to preserve and advance job satisfaction among teachers. The recruitment and retention of highly qualified, proficient teachers and educational leaders are foundational for the "success of future generations, especially for those living in underserved communities" (Learning Policy Institute, 2017, p. 4).

Definition of Terms

The following are terms used in this dissertation and their definitions:

Climate (organizational climate)

- collective employee perceptions of and affective response to the workplace culture; a reaction based on how individuals feel about working there; the mood (Berberoglu, 2018; Mullins, 2010).

- the atmosphere within the school is both experienced and perceived, which impacts the behaviors of the staff (Chagares, 2016; Hoy & Miskel, 2013).

School climate is a term that continues to acquire national attention via the Every Student

Succeeds Act (ESSA), and it is commonplace in academia to recognize school climate as

"a major factor" in school improvement efforts (Aldridge & Fraser, 2016; Bryk &

Schneider, 2003; Sailes, 2008; Schoen & Teddlie, 2008; Van Houtte, 2005). School

improvement and reform efforts risk failure by neglecting to address a school's culture

(Deal & Peterson, 1999), and leadership positively influences a teacher's vocational

outlook by ensuring a positive work environment (Aldridge & Fraser, 2016, p. 303).

Culture (organizational culture)

- "a pattern of shared basic assumptions learned by [an organization] as it solved its

   problems of external adaptation and internal integration, which has worked well enough

   to be considered valid and, therefore, to be taught to new members as the correct way to

   perceive, think, and feel in relation to those problems" (Schein, 2010, p. 18).

- the whole of norms, values, and rituals that hold the organization together and give the

   organization a distinctive identity (Daniëls et al., 2019; Heck & Marcoulides, 1996;

   Lester et al., 2014).

Extrinsic motivation: motivation based on external rewards instead of intrinsic ones (Deci, 1971).

Intrinsic motivation: a motivational theory involving performing an activity with no apparent

   reward except the activity itself. Such motivation can be either innate or learned (Deci,

   1971).

Job satisfaction: Job satisfaction is a difficult concept to define, and "there is little consensus on

   how to measure this construct" (Aldridge & Fraser, 2016; Skaalvik & Skaalvik, 2009).

- a "positive or negative evaluative judgment that people make about their job" (Brief &

   Weiss, 2002, p. 283).

- Pepe et al. (2017) offered the following historical summary of the literature on job satisfaction: "Locke's (1969) idea of a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences; Vroom's (1964, 1982) focus on workers' emotional orientation toward their job; Milkovich and Boudreau's (1997) definition of job satisfaction as a pleasurable response to job contents; versus Schultz's (1982) proposal that job satisfaction is simply employees' psychological disposition toward their work."

- an affective and positive job-related reaction to the workplace (Pepe et al., 2017; Worrell et al., 2006) that translates into how people generally feel about their work (Irving & Montes, 2009).

- job satisfaction consists of psychological and physiological factors, which integrated with environmental conditions, help employees become more self-aware of their happiness with their jobs (Aiken et al., 2002; Bakotic & Babic, 2013; Muskita & Kazimoto, 2017).

- "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1300), and has also piqued interest in fields such as "vocational and organizational psychology" (Malinen & Savolainen, 2016, p. 145).

Teacher job satisfaction: "teachers' affective reactions to their work and their teaching role" (Skaalvik & Skaalvik, 2011).

Leadership: "a process whereby an individual influences a group of individuals to achieve a common goal" (Northouse, 2019, p. 5).

Morale: one component of climate, and refers to the overall "outlook, attitudes, satisfaction, and confidence felt in the workplace by supervisors and coworkers" (Muskita & Kazimoto, 2017, p. 109; see also Heathfield, 2016), in response to both culture and climate.

Employee morale implies "the total satisfaction that a person derives from a job. It is not static; it changes and depends on working conditions. Employee morale is expressed through loyalty and productive work for an organization" (Muskita & Kazimoto, 2017, section 2, intro).

Public policy: the dynamic and value-laden process through which a political system handles a public problem (Fowler, 2013).

Social identity theory social theory is characterized by perceiving the world as us and them; subsets of race, religion, social class, education, and more (Tajfel et al., 1979).

Socioeconomic status (SES): operationally defined as the "social standing or class of an individual or group" is measured via a combination of "education, income and occupation" (American Psychological Association, 2020, p. 1).

Teacher Job Satisfaction Questionnaire (TJSQ): the instrument utilized or this study and has been consistently utilized in the educational field for decades, and consists of 66 items identifying interrelated factors of teacher job satisfaction, namely: pay, security, colleagues, working conditions, supervision, advancement, recognition, responsibility, and the work itself (Lester, 1984).

Work stress: "physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker" (CDC, 1999, para. 1).

Study Summary

Chapter II is next in succession and constitutes an assiduously collected, perseverant, and expansive review of the related literature. Chapter II structures and organizes factors that impact teacher job satisfaction, as guided by the seminal work in the field of teacher job satisfaction by Lester (1984). Lester's TJSQ has been consistently utilized in the educational field for decades and consists of 66 items identifying interrelated factors of teacher job

satisfaction: pay, security, colleagues, working conditions, supervision, advancement, recognition, responsibility, and the work itself (Lester, 1984).

Two major theoretical approaches are introduced in Chapter II and subsequently interwoven throughout this dissertation: (a) Maslow's hierarchy of needs theory and (b) Herzberg et al.'s two-factor theory, also known as motivational theory.

Chapter III (Methodology) augments the literature review and describes the methodology utilized herein, including ethical considerations, research questions, research design, data collection, instrumentation, reliability, validity, factor analysis, definition of factors, and data analysis. These were obtained and analyzed relevant to teacher perceptions of their job satisfaction, utilizing the TJSQ as an instrument. The TJSQ, which consists of 77 items, including 11 filler items, therefore, yielding 66 items (see Appendix E), was disseminated online and analyzed via exploratory factor analysis (EFA).

Chapter IV (Data Analysis) presents the findings of EFA, as they represent influence upon nine factors: pay, security, colleagues, working conditions, supervision, advancement, recognition, responsibility, and the work itself (Lester, 1984), and as analyzed using Stata v. 15.

Chapter V (Findings) presents a fusion of the findings, summative thoughts, practical applications, and future research recommendations.

CHAPTER II: REVIEW OF THE LITERATURE

Teacher Job Satisfaction

Background

The American teachers' plight has been recently assessed and described in grim terms, to wit: a "portrait of broad teacher discontent" (Phi Delta Kappa, 2019, p. k3). Teachers are the human capital of the educational system, where measures of job satisfaction imply an educational force weary of the task, waning in job satisfaction, and woefully wanting (Toropova et al., 2021).

Job satisfaction is a difficult concept to define or measure, as it incorporates multiple factors in which teachers assign differing values. Teacher job satisfaction is comprised of both intrinsic and extrinsic motivational factors where intrinsic motivation theorizes an activity is performed for no apparent reward; the reward is the activity. Conversely, extrinsically motivated persons necessitate an external reward (Deci, 1971).

Teacher job satisfaction is often viewed through the following attributes, which are aligned with the seminal work of Lester (1984) infused throughout this paper and offered as an inexhaustive overview of the literature:

(a) pay (Allegretto & Mishel, 2016; Geiger & Pivovarova, 2018, pp. 606-607; Hanushek et al., 2004; Learning Policy Institute, 2017; Lester, 1987, 1988; Lester et al., 2014; Markow et al., 2013, p. 6; McCarthy, 2019; "MetLife survey of the American teacher," 2013; Phi Delta Kappa, 2019; PDK, 2020, p. k8; Podgursky et al., 2004; U.S. Department of Education, 2015),

(b) security (Lester, 1987, 1988; Lester et al., 2014; Markow et al., 2013, p. 6; "MetLife survey of the American teacher," 2013; PDK, 2020, p. k8; Phi Delta Kappa, 2019; U.S. Department of Education, 2015),

(c) colleagues (Borman & Dowling, 2008; Cano-García et al., 2005; Chagares, 2016; Erikson & Erikson, 1998; Gavish & Friedman, 2010; Guarino et al., 2006; Kavenuke, 2013; Learning Policy Institute, 2017, p. 1; Lester, 1987, 1988; Lester et al., 2014; Madero, 2019; McCarthy, 2019; Muskita & Kazimoto, 2017; Pepe et al., 2017; Scholastic & Bill and Melinda Gates Foundation, 2012; Sell & Cleal, 2011; Simon & Johnson, 2015; Skaalvik & Skaalvik, 2011; Smith & Ingersoll, 2004; Tajfel et al., 1979; Van Droogenbroeck et al., 2014; Watlington et al., 2004),

(d) working conditions (García Torres, 2018, p. 130; Lester, 1987, 1988; Lester et al., 2014; see also Aldridge & Fraser, 2016; Berberoglu, 2018; Brown & Wynn, 2009; Brown et al., 2005, p. 120; Bryk & Schneider, 2003; Chagares, 2016; Covey, 1989; Engelbrecht et al., 2017; García Torres, 2018, p. 130; Geiger & Pivovarova, 2018; Hakanen et al., 2006; Hoy, 1990, p. 152; Hoy & Miskel, 2013; Johnson et al., 2012; Johnson & Birkeland, 2003; Ingersoll, 2001; Kelly, 2004; Kirby et al., 1999; Kraft et al., 2016; Ladd, 2011; Ma & MacMillan, 1999; McCarthy, 2019; Mullins, 2010; Muskita & Kazimoto, 2017; Office for Civil Rights (OCR), Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973; Rudasill et al., 2018; Sailes, 2008; Schein, 2010; Schoen & Teddlie, 2008; Shen et al., 2012; Skaalvik & Skaalvik, 2009; Smith & Ingersoll, 2004; Stockard & Lehman, 2004; Tickle et al., 2011; Tjambolang, 2013; Toropova et al., 2021; Van Houtte, 2005; Yan, 2020),

(e) supervision (Brezicha & Fuller, 2019; Brown et al., 2005, p. 120; Daniëls et al., 2019; Engelbrecht et al., 2017; García Torres, 2018; Geiger & Pivovarova, 2018; Goldring et al., 2014; Higgins, 1997; Johnson & Birkeland, 2003; Learning Policy Institute, 2017; Lester, 1987, 1988; Lester et al., 2014; Nagy & Wang, 2007; Noddings, 2014; Northouse, 2019; Supovitz et al., 2010; Sutcher et al., 2016; Weiss, 1999; Worthy, 2005),

(f) advancement (Aelterman et al., 2007; Cefai & Cavioni, 2014; Fisk-Natale et al., 2016; Konu et al., 2010; Lester, 1987, 1988; Lester et al., 2014, 2020; Louis et al., 2010; MacTavish & Kolb, 2006; Margolis & Nagel, 2006; Schaufeli & Bakker, 2004; Sergiovanni, 1969; Skaalvik & Skaalvik, 2014; York-Barr & Duke, 2004),

(g) recognition (Brezicha & Fuller, 2019; Bryk & Schneider, 2002; Buehner, 1971; Herzberg et al., 1959; Hulpia et al., 2011; Learning Policy Institute, 2017; Lester, 1987, 1988; Lester et al., 2014; Pink, 2005; Senge, 2006; Sergiovanni, 1969; Sutcher et al., 2016), (h) responsibility (Amati et al., 2010; Banerjee, 2016; Betoret & Artiga, 2010; Boudreaux et al., 1997; Brouwers & Tomic, 2000; Carver-Thomas & Darling-Hammond, 2017; CDC, 1999; Chang, 2009; Cross et al., 1994; Drakopoulos & Grimani, 2013; Fernet et al., 2012; Fisher & Gitelson, 1983; Geiger & Pivovarova, 2018, p. 607; Hakanen et al., 2006; Kalyva, 2013; Hanebuth, 2008; Janik & Rothmann, 2015; Konu et al., 2010; Kristensen, 1996; Lester, 1987, 1988; Lester et al., 2014; Leung & Lee, 2006; Louis et al., 2010; McCarthy et al., 2010; MacDonald, 1999; MacIntosh & Doherty, 2010; Madero, 2019; Margolis & Nagel, 2006; Markow et al., 2013; Maslach & Jackson, 1981; McCarthy, 2019; "MetLife survey of the American teacher," 2013; Moen et al., 2013; Mount et al., 2006; Pepe et al., 2017; Pines & Aronson, 1988; Schwarzer et al., 2000; Sell & Cleal, 2011; Sergiovanni, 1969; Skaalvik & Skaalvik, 2011, 2014, 2017; Theorell & Karasek,

1996; Tschopp et al., 2014; York-Barr & Duke, 2004); and (i) the work itself (Gkolia et

al., 2014; Lester, 1987, 1988; Lester et al., 2014; Madero, 2019; Ouyang & Paprock,

2006; Sergiovanni, 1969).

Two major theoretical approaches were utilized and interwoven throughout this

dissertation: (a) Maslow's (1943) hierarchy of needs and (b) Herzberg et al.'s (1959) motivation-

hygiene theory, also known as two-factor theory.

Factors of Teacher Job Satisfaction

Job satisfaction was previously defined in Chapter I and is restated here. Job satisfaction

is not easily defined but is inextricably linked to multiple variables, and a valid measure is

somewhat elusive (Aldridge & Fraser, 2016; Skaalvik & Skaalvik, 2009). One definition of job

satisfaction describes a "positive or negative evaluative judgment that people make about their

job" (Brief & Weiss, 2002, p. 283).

As enumerated exhaustively at the inception of Chapter II, numerous studies have

sought to categorize the factors of educators and their work. One such study, the MetLife

Survey of the American Teacher (2013), is an educational mainstay spanning two decades and

describing teacher job satisfaction in terms of personal characteristics, school characteristics,

student achievement (curriculum & instruction), budget, leadership pipeline, and view of

leadership (principal).

A teacher's job satisfaction has its roots in extrinsic and intrinsic elements of the

educational system. Teaching salary, school safety, perceived support from leaders, school

culture, and school resources are the primary motivation elements. However, intrinsic elements

such as instructional activities, unique student qualities, and autonomy are influences as well

(Gkolia et al., 2014; Madero, 2019; Ouyang & Paprock, 2006).

Not surprisingly, teacher job satisfaction correlates with teacher turnover and other dissatisfaction factors (Phi Delta Kappa, 2019). Namely, inadequate pay and benefits, stress, burnout, lack of respect, conflict with school administrators and boards of education, workload, and poor working conditions were identified as factors. Clearly, dissatisfaction and a subsequent exodus of teachers from the workforce negatively impact our educational system(s) and can be the impetus for positive change as well. Additionally, teachers cite dissatisfaction, personal/family reasons, retirement, to pursue another job, and financial reasons for leaving (Sutcher et al., 2016, p. 49).

This study is guided by the seminal work in the field of teacher job satisfaction by Lester (1984). Lester's TJSQ has been consistently utilized in the educational field for decades, consisting of 66 items identifying interrelated factors of teacher job satisfaction: pay, security, colleagues, working conditions, supervision, advancement, recognition, responsibility, and the work itself (Lester, 1984).

Pay and Security

Research indicating a broad "teacher discontent" (PDK, 2019; Figure 3) includes 60% of teachers who indicate inadequate salary and 55% who contemplate job action(s) such as a strike to remediate such. *Pay* refers to the annual income, which may serve as an indicator of recognition and achievement or of failure, while *security* refers to the "school's policies regarding tenure, seniority, layoffs, pension, retirement, and dismissal" (Lester et al., 2014, p. 159). The stakeholders in those reporting districts seemingly concurred, where 74% of parents and 71% of all adults stood in solidarity to support such a prospective strike, risking job security. However, regional differences exist, and the poll, therefore, differentiates pay satisfaction responses by region. Namely, 60% of teachers domiciled in the Northeastern United States

believed they were remunerated, while only 30% of their Southern and Midwestern counterparts

felt similarly, with 47% of the West feeling fairly remunerated (Phi Delta Kappa, 2019; Figure

3). Salary continues to be a factor of retention for many educators, as teachers report what seems

to be obvious, "salary level significantly affects both teacher recruitment and teacher retention"

(Geiger & Pivovarova, 2018, p. 607; see also Auguste et al., 2010; Dolton & Van der Klaauw,

1999; Hargreaves, 2009; Hargreaves et al., 2007).

Research indicates teachers who perceived themselves as inadequately remunerated were

60% more likely to leave their prospective schools, falling to attrition (Chagares, 2016; Russell

et al., 2010). Time of service in the profession is an identified factor, where 50% of educators

exceeding 20 years in the field described the compensation as fair, compared to only 31% of

peers with 10 years or less experience. Teachers' age yielded similar results, as more

experienced teachers, described as 50 or older, believed to be fairly compensated compared to

34% of peers feeling similarly if aged 22-49 (Phi Delta Kappa, 2019).

Tenure is also a factor of security, typically achieved after three to four years of service.

Security is often perceived in terms of funding and generally inversely related to stress. A

declining trend in teacher job satisfaction is also characterized by stress and concern regarding

inadequate funding for programs. The "last hired, first fired" practice that many districts utilize,

often per collective bargaining agreements, may lead to staff reduction, thereby collaterally

dashing young aspiring students' hopes of pursuing the educational arena (Gordon, 2011;

"MetLife survey of the American teacher," 2013).

The funding of schools is the lifeblood of educational systems, closely tied to policy, and

presenting the greatest concern noted for 19 consecutive years (PDK, 2020, p. k8).

Figure 3

PDK Poll: Teachers Feeling Fairly Paid (2019)

Source. https://pdkpoll.org/wp-content/uploads/2020/05/pdkpoll51-2019.pdf.
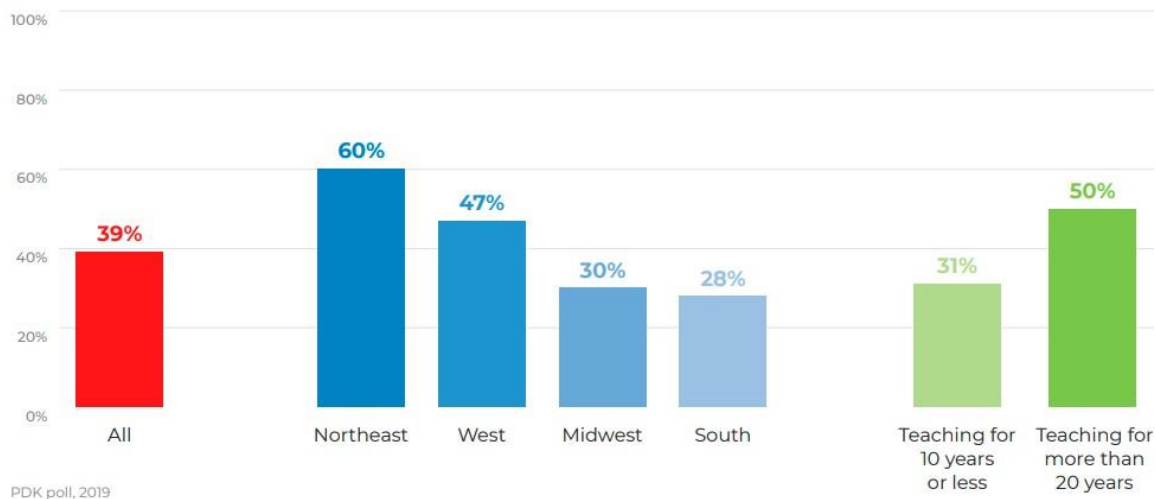
Furthermore, "less satisfied teachers" are more likely housed in schools with declining budgets, "61% vs. 47%;" where teachers were situated is schools of declining professional development; "21% vs. 14%," and where common and collaborative time also declined "29% vs. 16% in the last 12 months" (Markow et al., 2013, p. 6).

Appropriate competitive remuneration is also positively associated with teacher retention (Geiger & Pivovarova, 2018; Hanushek et al., 2004; Podgursky et al., 2004). In comparison to non-teachers, teachers receive less remuneration despite possessing work experience and education equal to other non-teachers, a disparity gap that is growing from 4.3% in 1996 to 17% in 2015 (Allegretto & Mishel, 2016; Learning Policy Institute, 2017; McCarthy, 2019). Moreover, a recent study purports that, to achieve job satisfaction, teachers must receive an adequate wage for themselves and their families (Ali, 2021).

Salary is a factor that research (Auguste et al., 2010; Dolton & Van der Klaauw, 1999; Geiger & Pivovarova, 2018, p. 607; Hargreaves, 2009; Hargreaves et al., 2007) has indicated

impacts both teacher recruitment and retention, but "the quality of administrative support" is

identified "as more important to their decision than salaries" (Learning Policy Institute, 2017, p.

1). This indicates that intrinsic rewards or characteristics could impact teachers' decisions to

leave the profession, where relationships with colleagues and working conditions may be more

influential than extrinsic benefits.

Colleagues

Teachers derive self-esteem from the groups to which they belong (Tajfel et al., 1979).

One such group is that of coworkers, where teacher to teacher relationships comprise a critical

component of teacher job satisfaction (Pepe et al., 2017). Lester et al. (2014) defined *colleagues*

as the teacher's workgroup, including social aspects occurring within the school setting, and

wherein teachers give and receive support in the pursuit of common goals. Social interaction

involves various aspects of work, including commonality of "attitudes, the performance of jobs,

the formation of personal relationships among fellow teachers, and an increase in self-esteem"

(Lester et al., 2014, p. 159). Tajfel et al. (1979) defined this concept as social identity theory,

where teachers' self-esteem is impacted by colleagues and can lead to subsets (e.g., race,

religion, social class, level of education) of an "us versus them" mentality. This manner of

thinking impacts the quality of those educator-to-educator relationships and is ultimately a

critical component of teacher job satisfaction (Pepe et al., 2017).

On the surface, the field of education appears to be a social profession; ironically,

however, research reports that teachers work in isolation about 95% of the time spent in schools

(McCarthy, 2019; Scholastic & Bill and Melinda Gates Foundation, 2012). The concept of

isolationism is a factor of teacher job satisfaction, one viewed via a psychological and

sociological lens, describing psychosocial development wherein one component includes the

personality development conflict depicted as intimacy versus isolation (Erikson & Erikson, 1998). Mastering this stage involves establishing and utilizing effective, satisfying relationships, both personal and those at work. The subsequent stage includes generativity vs. stagnation, where one seeks to contribute to the world via work relationships and contribution to their community, hopeful of personal and professional legacy.

Interpersonal relationships are critical in the life of an educator (Pepe et al., 2017; Van Droogenbroeck et al., 2014). Healthy, satisfactory relationships with all educational stakeholders, including peers, parents, and students can help to alleviate the negative impacts of teaching (Cano-García et al., 2005; Gavish & Friedman, 2010; Skaalvik & Skaalvik, 2011). The educational workplace offers educators an opportunity to seek intrinsic and extrinsic rewards, elevating work to a "fundamental organizing element in people's lives" wherein workers' morale impacts collective productivity and human connection (Muskita & Kazimoto, 2017, p. 3). To this end, teachers seek interaction, collaboration, and connection with their coworkers.

Research indicates schools that enjoy high levels of teacher support had less attrition than schools devoid of mentoring or induction programs (Borman & Dowling, 2008; Chagares, 2016; Guarino et al., 2006; Kavenuke, 2013; Simon & Johnson, 2015; Smith & Ingersoll, 2004; Watlington et al., 2004). Teachers indicate the importance of "school culture and collegial relationships, time for collaboration, and decision- making input—also areas in which the principal plays a central role" (Learning Policy Institute, 2017, p. 1). Therefore, connection to colleagues through leadership opportunities is a critical factor of teacher job satisfaction, where the quality of such is a primary factor considered in exiting a school (Learning Policy Institute, 2017).

Working Conditions

According to Lester et al. (2014), *working conditions* refer to the "physical conditions of the work environment, as well as the overall aspects of the school organization as defined and communicated by its administrative policies" (p. 159). Working conditions also incorporate the "physical features of the workplace, the organizational structure, and the sociological, political, psychological, and educational features of the work environment" (Ladd, 2011, p. 237; see also Johnson, 2006; Johnson et al., 2005). Moreover, work conditions comprise six crucial dimensions regarding teacher working conditions, namely: leadership, facilities and resources, teacher empowerment, professional development, mentoring, and time (Ladd, 2011; Yan, 2020).

Kraft et al. (2016) conducted an exploratory factor analysis, identifying "organizational features of schools," namely: "(1) leadership and professional development (leadership); (2) high academic expectations for students (expectations); (3) teacher relationships and collaboration (relationships); and (4) school safety and order (safety)" (p. 1421).

Leadership and Professional Development

Leadership factors have also been described as including (a) principal attributes and b) professional development, where effective leaders "communicate a clear vision, encourage open communication on important school issues, are effective managers, support their teachers, provide time for collaboration, and provide feedback on teachers' instruction," as well as providing targeted, relevant, and efficacious professional development (Kraft et al., 2016, p. 1422).

Expectations

The second-largest factor loading was that of expectations (i.e., setting high expectations for students and their work), establishing "clear measures of progress for student achievement,"

assisting students "develop challenging learning goals," and generally supporting students in attaining these goals (Kraft et al., 2016, p. 1422).

Relationships

Factor three identified the degree to which teachers feel, "supported by their colleagues, work together to improve their instructional practice, trust one another, respect peers who take on leadership roles, and respect colleagues who are the most effective teachers" (Kraft et al., 2016, p. 1422). Factor four was characterized by criminal activity, violence, bullying, maintenance of discipline, appropriate administrative response to discipline needs, and respect for students' and teachers' feelings of safety while at work (Kraft et al., 2016).

Safety

Physical working conditions are foundational for the safety of staff and student alike and include infrastructure and physical workspaces, appropriate furniture, controlled noise, lighting, proper air circulation, appropriate protective gear and office equipment, and ample resources, all of which positively impacted morale (Muskita & Kazimoto, 2017; Tjambolang, 2013). However, the gains of appropriate physical workplaces are lost when poor working relationships arise between employees and leadership, leading instead to "low morale, stagnant productivity, and high turnover rates" (Muskita & Kazimoto, 2017, p. 108).

A robust inverse relationship was reported across all four dimensions of school climate related to teacher turnover, suggesting a positive work environment could be critical to reducing teacher turnover (Kraft et al., 2016). Berberoglu similarly concluded that if employees positively perceive the work climate, they tend to have higher levels of organizational commitment (Berberoglu, 2018).

With that said, climate and culture are often used indiscriminately. Climate and culture are first differentiated by their histories, where climate studies were birthed in both industrial and social psychology and predominantly utilized quantitative methodologies such as surveys and multivariate statistical analyses to analyze behaviors, or at least the perceptions thereof (Hoy, 1990). Conversely, culture was birthed from the fields of sociology and anthropology and typically uses qualitative research methods such as ethnographic techniques to identify abstract systems of "shared beliefs and values" (Hoy, 1990, p. 165).

Climate

School climate is of sufficient import in the educational field to muster an organization of its namesake, the National School Climate Center (NSCC), which defines school climate as the "quality and character of school life" (NSCC, 2021, p. 1). Climate is further described as the atmosphere within the school, which is both experienced and perceived, and which impacts the behaviors of the staff (Chagares, 2016; Hoy & Miskel, 2013). This definition incorporates both "affective and cognitive perceptions regarding social interactions, relationships, values, and beliefs held by students, teachers, administrators, and staff within a school" (Rudasill et al., 2018, p. 46).

School climate is a relatively "enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools" (Hoy, 1990, p. 152), and the "meaning attached to the policies, practices, and procedures employees experience, as well as the behaviors they observe getting rewarded and that are supported and expected" (Schneider et al., 2013, p. 362).

School climate includes a relational component, where a positive school climate is composed of "trust, cooperation, and openness," and that composition governs interactions

among teachers, as well as "between teachers and students" (Rudasill et al., p. 46). School

climate is a term that continues to acquire national attention via the ESSA, and it is

commonplace in academia to recognize school climate as a primary factor in school

improvement efforts (Aldridge & Fraser, 2016; Bryk & Schneider, 2003; Sailes, 2008; Schoen &

Teddlie, 2008; Van Houtte, 2005). School improvement and reform efforts risk failure by

neglecting to address a school's culture (Deal & Peterson, 1999), and leadership positively

influences a teacher's vocational outlook by ensuring a positive work environment (Aldridge &

Fraser, 2016, p. 303).

Culture

Administrative policy also impacts the work environment, a large component being an

organization's culture. *Organizational culture, or culture,* has been defined as "a pattern of

shared basic assumptions learned by [an organization] as it solved its problems of external

adaptation and internal integration, which has worked well enough to be considered valid and,

therefore, to be taught to new members as the correct way to perceive, think, and feel in relation

to those problems" (Schein, 2010, p. 18).

Stated colloquially, organizational *culture* can be defined as how we do things around

here (i.e., the personality of the workplace; Berberoglu, 2018; Mullins, 2010). Thus, *school*

culture describes the concept of culture as occurring in a school and refers to the collective

"norms, values and rituals that hold the organization together," and that create a "distinctive

identity" (Daniëls et al., 2019; Heck & Marcoulides, 1996; Schein, 1996). Culture can be viewed

as the personality of the organization, entrenched over time, and difficult to change.

Morale

Morale is one component of climate and refers to the overall "outlook, attitudes,

satisfaction, and confidence felt in the workplace by supervisors and coworkers" (Heathfield,

2016; Muskita & Kazimoto, 2017, p. 109) in response to both culture and climate. Also known

as *psychological climate*, morale is one's assessment of the work environment's impact upon

one's well-being (James & James, 1989). Morale can also be defined as a mental and/or

emotional state wherein a worker or workers feel positive regarding their workplace, positively

impacting organizational commitment, giving common purpose, and indicating psychological

well-being (Behm, 2009; Blackburn, 2015; Roncesvalles & Gaerlan, 2020).

School quality is influenced by leadership based on collective perceptions of teachers

(Daniëls et al., 2019; Hoy & Clover, 1986). Moreover, "poor working relationships" between

employees and leadership leads to "low morale, stagnant productivity, and high turnover rates in

these organizations" (Muskita & Kazimoto, 2017, p. 108). Employee morale often manifests

through "loyalty and productive work for an organization" (Muskita & Kazimoto, 2017, p. 110).

Last, effective educational leaders, particularly principals, are the primary shapers of their

school's culture (Daniëls et al., 2019; Dös & Savas, 2015; Malone & Caddell, 2000; Supovitz et

al., 2010).

Working Conditions and Job Satisfaction

School working conditions impact teacher job satisfaction. However, a study revealed

that the social aspects of such, namely the effects of "collegial support, principal's leadership,

and school culture of trust and respect" were nearly double "the effect of school material

resources" (Toropova et al., 2020, p. 5; see also Johnson et al., 2012). Studies of working

conditions in schools have reflected the trend of teachers leaving certain genres of schools, that

is, those with high poverty and high minority enrollments (Borman & Dowling, 2008; Boyd et al., 2011; Johnson et al., 2012; Ladd, 2009, 2011; Loeb et al., 2005), but that such an exodus occurs not based on student demographics as previously thought, but teachers leave based upon the working conditions in which their students must learn (Johnson et al., 2012).

Work Environments and Retention

In short, teachers are fleeing dysfunctional, non-supportive workplaces, which coincidentally are likely to be those composed of low-income and minority students (Johnson et al., 2012). Moreover, favorable workplace environments can predict students' academic growth, even when we compare schools serving demographically similar groups of students (Johnson et al., 2012, p. 4; see also Ladd, 2009). Additional research indicated, "poverty, minority composition, and passing state exams did not impact a decision to transfer schools after the 1st year of teaching" (Harrell et al., 2019, p. 144). Research indicates "teacher autonomy, administrative support and leadership, and staff collegiality were the most commonly reported, strongest predictors of satisfaction" (García Torres, 2018, p. 130; Johnson et al., 2012; Ma & MacMillan, 1999; Shen et al., 2012; Skaalvik & Skaalvik, 2009; Stockard & Lehman, 2004; Tickle et al., 2011).

Other factors such as "changing employee job descriptions, general misunderstandings, providing unclear guidance for job orientation, a lack of open communication with management, and empowering nonqualified persons for certain tasks to affect employee morale" (Muskita & Kazimoto, 2017, p. 108). Unmitigated conditions such as these can increase "turnover rates, complaints, and absenteeism; all of which are evidence of low morale" (Muskita & Kazimoto, 2017, p. 108; see also Roelofsen, 2002), where employees flee seeking better working conditions (Muskita & Kazimoto, 2017, p. 108; see also Raziq & Maulabakhsh, 2014). Teachers report

working conditions as significant predictors of their retention or attrition (Ingersoll, 2001;

Jackson, 2009; Johnson & Birkeland, 2003; Ladd, 2011; Loeb et al., 2005).

Work Environments and Civil Rights

Workplaces, including schools, have formal and informal policies that impact teachers

(McCarthy, 2019). Policies regarding mentoring, teacher evaluation, and student discipline are

typical. However, policies include critical workplace protections, including safety and

compliance to the law. School districts often attempt to ensure all stakeholders of such via

notices of non-discrimination, purporting to establish anti-discrimination and anti-harassment

policies to protect staff and students alike via equitable enforcement. Such policies are intended

to positively impact workplace safety and wellness, educational efficacy, culture, and climate.

Due diligence is required by law, as schools are recipients of federal funding.

Anti-discrimination Protections

Federal and state statute, as well as school policies, offer guidance, procedures, and

protections in weightier matters such as discrimination, harassment, child abuse, and the

reporting and investigation thereof, which quite subtly and without notice to the untrained eye,

either establish a workplace culture of integrity and compliance to the law or embedded

collusion. The U.S. Department of Health and Human Services, through the U.S. Office for Civil

Rights (OCR), routinely offers guidance to schools regarding compliance to federal civil rights

laws that prohibit discrimination in programs or activities that receive federal financial assistance

from the Department of Education (U.S. OCR, 2020). Complaints alleging a violation of the

ADA and the Health Insurance Portability and Accountability Act are under the purview of

OCR. Discrimination based on "race, color, and national origin is prohibited by Title VI of the

Civil Rights Act of 1964; sex discrimination is prohibited by Title IX of the Education

Amendments of 1972; discrimination based on disability is prohibited by Section 504 of the

Rehabilitation Act," and the American's with Disabilities Act (U.S. OCR, 2020, para. 3). Section

504 of the Rehabilitation Act of 1973 prohibits discrimination based on disability in any program

or activity operated by recipients of federal funds, while Title II of the ADA of 1990 prohibits

discrimination based on disability by public entities, regardless of whether they receive federal

financial assistance (U.S. Department of Education, 2020).

Effects Upon Job Satisfaction

Employers who generally ignore employee morale, or worse, intentionally refuse to

mitigate specific violations to law, often suffer legal and financial consequences, including

decreased worker "productivity, increases in absenteeism, conflict, and turnover," as well as

added expenditures (Muskita & Kazimoto, 2017, p. 110). Moreover, if teachers perceive a

leadership style as abusive, such a view diminishes the employees' "perception of justice,"

thereby demoralizing teachers and violating "expectations of fair treatment" in the educational

workplace (Burton et al., 2014, p. 11; Burton & Hoobler, 2011; Tepper, 2000). Behaviors are

toxic, or destructive "if they violate the legitimate . . . rightful and lawful, interests of the

organization" (Einarsen et al., 2007, p. 210).

Conversely, supportive, non-toxic work environments provide the necessary supports

for teacher-leaders, including positive climate and culture, shared or participatory decision-

making models in lieu of authoritarian rule, and supportive relationships between teacher-

leaders, their colleagues, and district administrators (Fisk-Natale et al., 2016; York-Barr &

Duke, 2004). Teachers report administrative support as a key impetus to remain in the

classroom, including receipt of emotional and instructional support and outweighing factors

such as workload (Learning Policy Institute, 2017, p. 2).

Supervision

Defined

According to Lester, *supervision* refers to "supervisory style," defined by "task-oriented behavior and person-oriented behavior," the former requiring "direction and coordination of group activities to achieve the goals of the organization" whereas the latter "requires trust, respect, support, friendship, openness, and attempts to improve the environment" (Lester et al., 2014, p. 158). The gains of providing appropriate physical workplaces are lost when poor working relationships arise between employees and leadership, leading instead to "low morale, stagnant productivity, and high turnover rates" (Muskita & Kazimoto, 2017, p. 108).

Leadership Styles

Some leadership styles have proven more effective than others (Bogler, 2001) in such weightier matters, and ethical leadership, defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making, stands out among other styles" (Brown et al., 2005, p. 120; Engelbrecht et al., 2017).

The Learning Policy Institute (2017) reported, "a principal's leadership style is associated with teachers' decisions to leave the school or profession," and that leaders who do not "view themselves as traditional, omnipotent, 'top-down' administrators" have been associated with low teacher attrition rates (Learning Policy Institute, 2017, p. 2) Instead, these principals describe their leadership style in behavioral terms, that of "facilitators, collaborators, team leaders, or leaders of leaders" while employing "leadership teams, interview teams, or site-based management teams to make school-based decisions," to foster collaboration and create a broader sense of ownership (Learning Policy Institute, 2017, p. 2).

Leadership style impacts schools, as supportive, collaborative principals; principals who allowed for collective, shared decision making and established a school culture of trust were inversely correlated with teacher attrition (Brown & Wynn, 2009; García Torres, 2018, p. 130). This same workplace environment offers workers potential morale-building opportunities via intrinsic and extrinsic rewards, sometimes manifesting organizational loyalty, a fruit of sustained, positive morale (Muskita & Kazimoto, 2017). Supervision has been identified as a critical factor impacting teacher job satisfaction. Teacher retention (staying in the field) and attrition (leaving) are undeniable markers of such. Therefore, leadership quality is of utmost import to teacher job satisfaction and "emerged as the most salient factor for teacher retention," and "leadership quality was even more significant for retention in disadvantaged schools" (García Torres, 2018, pp. 129-130).

Toxic Leaders

Organizational culture, devoid of ethical leaders, can create toxically negative educational workplaces, which can contribute to burnout, and include such elements as perceived negative working conditions (Aravena, 2019), including but not limited to "an increasing workload, lack of job stability, and poor status or prestige of the teaching profession" (Geiger & Pivovarova, 2018, p. 607; see also Hakanen et al., 2006). If workers are unconvinced that their respective leaders are honest and of high integrity, systemic efforts to improve school climate and morale are in vain, plunging employee morale and catapulting the worker into a state of self-protectionism (Muskita & Kazimoto, 2017, p. 110). Integrity is defined as "honesty and consistency between a person's espoused values and behaviour" (Yukl, 2013, p. 331) and either creates or denigrates a workplace of trust between teachers and leaders (Engelbrecht et al., 2017, p. 4).

Such motivational factors, or the lack thereof, create "certain followers" who are "unable or unwilling to resist domineering and abusive leaders" (p. 183) and endure such in trade for safety, security, group membership, and predictability in an uncertain world, namely (a) conformers and (b) colluders (Padilla et al., 2007, p. 183; see also Kellerman, 2004; Lipman-Blumen, 2005a, 2005b).

Conformers are vulnerable due to unmet needs, possess negative self-evaluations, and because of these elements of psychological immaturity, are motivated by fear to comply with destructive leaders to avoid further unpleasantness (Dentler & Erikson, 1959; Higgins, 1997; Padilla et al., 2007, p. 183). Instead, *colluders* engage actively in the agenda of the destructive leader, specifically for personal gain. Conversely, colluders are typically selfish, ambitious, and eager to adopt the destructive leader's cultural views (Higgins, 1997; Padilla et al., 2007, p. 183).

Effective Leaders

Effective leaders can mitigate negative organizational workplace culture that impacts teacher job satisfaction by ensuring proper supports, particularly appropriate leadership and collegial supports, as well as funding for both targeted professional development and efficacious mentoring (Geiger & Pivovarova, 2018; Ingersoll, 2001; Kirby et al., 1999; Smith & Ingersoll, 2004). The conflict management techniques employed by school administrators are critical factors of teacher job satisfaction (Alabu et al., 2020; Momanyi, 2016). Supportive work environments include effectual resolution of conflicts, possibly employing tenets of a "win-win" outcome, a leadership style offering mutual benefit (Covey, 1989). Again, teacher attrition is multi-faceted. However, higher attrition is repeatedly associated with toxic or negative workplace conditions, unmitigated student behavioral and disciplinary issues, and a general deficiency to support teachers (Geiger & Pivovarova, 2018; Johnson & Birkeland, 2003; Kelly,

2004; Stockard & Lehman, 2004). On a more somber note, the antithesis of effective leadership also exists, as research concluded, "a positive relationship between employees' reports of abusive supervision and their turnover intentions" (Mathieu & Babiak, 2016, p. 103; see also Tepper et al., 2009).

Leadership and Attrition

To that end, teachers are more likely to remain in the field, or their particular school, when they feel supported by their leadership (Learning Policy Institute, 2017). In fact, research suggests that support from leaders such as a principal is more important than workload when deciding to stay at or leave a school, and support is multi-faceted, including a leader's provision of emotional and instructional support (Learning Policy Institute, 2017, p. 2; Figure 4). Moreover, teachers prioritize leadership highly, often identifying "the quality of administrative support as more important to their decision than salaries," in their decision to stay or leave a district (Learning Policy Institute, 2017, p. 1).

Successful principals develop efficacious approaches to leadership, approaches that enable the administrator to successfully lead, often censoring fruitless arguments to concentrate instead on core values of empathetic support, social justice, a committed work ethic, a sense of humor (Mulford & Johns, 2004), and an urgency to both illuminate and initiate corrective actions to combat declining teacher morale (Noddings, 2014, p. 15).

Leadership and Job Satisfaction

Educational leadership, good and bad, is paramount among teacher job satisfaction factors, as teachers boldly crown leadership as the strongest predictor of [teacher] retention (Boyd et al., 2011; García Torres, 2018, p. 140; Grissom, 2011; Ladd, 2011). Moreover, effective educational leaders, particularly principals, are the primary shapers of their school's

culture (Daniëls et al., 2019; Dös & Savas, 2015; Malone & Caddell, 2000; Supovitz et al., 2010). Supportive, positive work environments are critical factors impacting teacher retention, as teachers who perceived support from school leaders and those who experienced positive collaborative experiences with their peers were less likely to fall to attrition and more likely to be retained (Geiger & Pivovarova, 2018; Johnson & Birkeland, 2003; Nagy & Wang, 2007; Worthy, 2005).

Figure 4

Possibility of Teacher Turnover in Relation to Administrative Support.
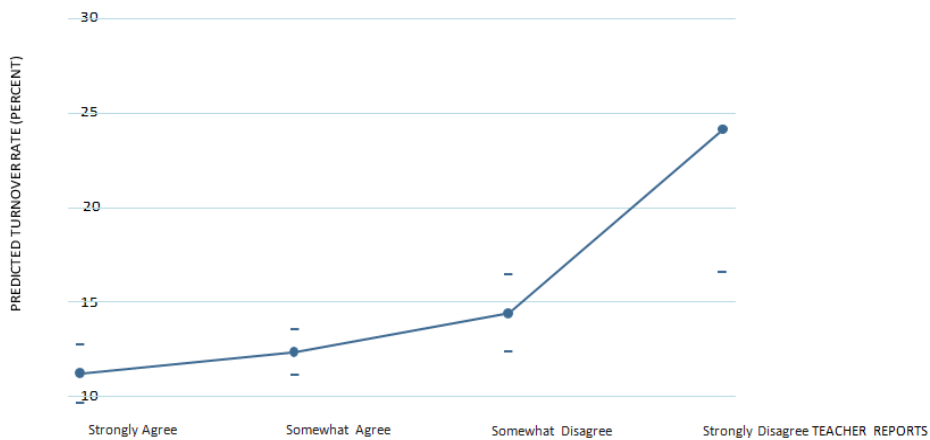
Source: LPI analysis of the Teacher Follow-Up Survey (TFS), 2013, from the Schools and Staffing Survey, National Center for Education Statistics.

Source. Sutcher et al., 2016, p. 52. Teachers' reports about the extent to which their "school administration is supportive."

There is some evidence that positive interactions between teachers and leaders may not be solely responsible for a positive work outlook, but that the existence of such may lead to "other positive work conditions that contribute to teachers' job satisfaction" (García Torres, 2018, p. 130) such as participation in shared decision-making, and feeling a sense of self-autonomy; predictive measures of teacher retention, fostered by effective school leaders (Weiss, 1999).

Best Leadership Practices

Effective, ethical educational leaders must leverage the specific strengths of their teachers and staff to manifest the unique exploits of individualized talents and abilities and foregoing punitive and political appointments. The responsibilities of leadership are complicated, fluid, and driven by societal angst. Researchers, philosophers, and historians alike have sought to define leadership, but it is elusive and fluid; waxing and waning in societal forces, and operationally defined as "a process whereby an individual influences a group of individuals to achieve a common goal" (Northouse, 2019, p. 5).

Moreover, effective educational leaders, particularly principals, are the primary shapers of their school's culture and working conditions (Daniëls et al., 2019; Dös & Savas, 2015; Malone & Caddell, 2000; Supovitz et al., 2010). Effectual principals are adequately self-aware, embracing the onus of responsibility that positive change within their schools is their job (Whitaker, 2012, p. 22), and an opportunity to establish mutual trust between principal and teachers (Supovitz et al., 2010).

Effective leaders establish a culture of trust within their schools, described as the lubricant of organizational functioning, freeing teachers from preoccupation with physical or emotional safety to focus on the work itself. By establishing trust, leaders create educational opportunities to collaborate toward common goals ensured by genuine goodwill and positive intentions betwixt leader and teacher (Brezicha & Fuller, 2019; Tschannen-Moran, 2004, p. 16). However, leadership is a critical shaper of those within the educational walls. However, research, and therefore, science-based professional development for administrators, is strikingly absent, and agreement among educational leaders regarding efficacy is rare (Daniëls et al., 2019).

Supportive, non-toxic work environments provide the necessary supports for teacher-leaders, including positive climate and culture, shared or participatory decision-making models in lieu of authoritarian rule, and supportive relationships between teacher-leaders and their district administrators (Fisk-Natale et al., 2016; York-Barr & Duke, 2004). With that said, research that focuses on dark leadership, negative educational practices, and negative educational institutions is rare, although such practices are "oppressive, violate civil rights" (Woestman & Wasonga, 2015, p. 1; see also Blasé & Blasé, 2003; English, 2007), and are "undesirable because of their potency for hopelessness" (Woestman & Wasonga, 2015, p. 1). Amiel (n.d.) painted a desperate portrait for us, as "Truth is not only violated by falsehood, it may be equally outraged by silence" (p. 1).

Advancement

Advancement or promotion refers to a "change in status or position, which may be equated with greater wages and power" (Lester et al., 2014, p. 159). Teacher job satisfaction can be derived from the work itself, an aggregate of advancement (achievement), recognition, and responsibility combined (Lester, 1988; Sergiovanni, 1969). However, such acts must be supported, even inspired, via equitable treatment, acknowledgment, and valuing of staff, supporting staff via resources, educating staff regarding school policies, and mitigating and effectively redressing any and all violations of, or inequitable applications of, contract, statute, or law (Aelterman et al., 2007; Lester et al., 2020; MacTavish & Kolb, 2006).

Schools can influence meaningful teacher engagement by effectively involving teachers in meetings and professional development, routine faculty meetings, and policy and professional development efforts, as well as via the provision of common forums for sharing of best practices, pooling of resources, and collaborating (Konu et al., 2010; Lester et al., 2020; Louis et al., 2010;

Margolis & Nagel, 2006; Skaalvik & Skaalvik, 2014). To be successful, though, the worker

requires an environment conducive to such. With the onset of social-emotional learning, holistic

approaches to organizational wellness have come to the forefront, where schools can invite

inclusivity, belongingness, and collegiality via a positive school climate and culture. Staff

engagement opportunities simultaneously address and promote social and professional well-

being (Cefai & Cavioni, 2014; Lester et al., 2020). Engaged, achievement-oriented employees

are described as energetic, passionate, and dedicated to their work, and possessing efficaciously

sufficient skills to meet workplace demands (Lester et al., 2020; Schaufeli & Bakker, 2004).

Teacher leadership is one area of promotion and is operationally defined as follows: the

process by which teachers, through individual or collective efforts, "influence their colleagues,

principals and other members of school communities to improve teaching and learning practices

with the aim of increased student learning and achievement" (York-Barr & Duke, 2004, pp. 287-

288). Provision of teacher leadership opportunities is one effective means to both recruit and

retain teachers; ones who can take the form of department chairs, peer coaching and evaluation,

committee membership, union officer positions, mentors, teachers on special assignment, as well

as assisting with professional development and providing teachers a voice with leadership.

(Wixom, 2016)

Collaborative, non-competitive work environments provide the necessary supports for

teacher-leaders, including positive climate and culture, shared or participatory decision-making

models in lieu of authoritarian rule, and supportive relationships among teacher-leaders, their

colleagues, and district administrators (Fisk-Natale et al., 2016; York-Barr & Duke, 2004).

Recognition

Recognition is described at this juncture of this paper as adhering to the subgroups of the

TJSQ. However, recognition behaviors of leadership can rightly be included under the supervision heading and are reaffirmed there. Per the TJSQ, *recognition* is defined as "the attention, appreciation, prestige, and esteem of supervisors, colleagues, students, and parents" (Lester et al., 2014, p. 159).

Teacher attrition was previously established as a blatant indicator of teacher job satisfaction, where effective leadership is associated with reducing teacher attrition Learning Policy Institute, 2017; see also Kraft et al., 2016). Attrition is correlated with leaders' recognition behaviors, as data indicate teacher attrition rates approaching 25% for those who describe their educational leader as *deficient* in encouraging and/or acknowledging staff, communicating a "clear vision," and generally running a "school well" (Learning Policy Institute, 2017, p. 1; see also Sutcher et al., 2016); a rate double that of teachers "who feel their administrators are supportive" (Learning Policy Institute, 2017, p. 1; see also Sutcher et al., 2016).

Educational leadership styles incorporate multiple factors and correlate with teacher job satisfaction. One common lens of leadership integrates a holistic lens, one where the world is not comprised of "separate, unrelated forces," and that job satisfaction is a "complex, interrelated collection of motivation and behavior" (Senge, 2006, p. 3). To provide for a successful work environment, educational leaders must eliminate "job dissatisfiers" and provide a conducive environment for job satisfiers (Herzberg et al., 1959).

Relational leaders identify valuing people as a core value (Baldrige, 2019) and "seek first to understand," utilizing empathy (Covey, 1989). A spirit of cooperation within leadership teams, as well as a shared decision-making model, have been identified as predictors of loyalty or organizational commitment (García Torres, 2018; Hulpia et al., 2011), while the building principal is often the key actor who enables the favorable work conditions critical for teacher

loyalty and commitment (Devos et al., 2014). Leaders who ensure trusting workplace relationships may mitigate negative workplace emotions such a vulnerability, which, left unchecked, may impede productivity and well-being (Brezicha & Fuller, 2019; Bryk & Schneider, 2002).

Basic human relations have seemingly fallen by the wayside in leadership realms, and we are warned, "School administrators who proceed with the assumption that human relations is of some secondary importance to specific job-related tasks find that motivating their employees to give their best effort is challenging" (Fiore, 2013, p. 77). Relationships, or the quality thereof, are reported to be non-negotiable requisites of job satisfaction for educators (Pepe et al., 2017). Interpersonal relationships are described as critical in the life of an educator (Pepe et al., 2017; Van Droogenbroeck et al., 2014), whereas healthy, satisfactory relationships with all educational stakeholders, including peers, parents, and students "mitigate some of the adverse effects of teaching work" (Cano-García et al., 2005; Gavish & Friedman, 2010; Skaalvik & Skaalvik, 2011).

Auto pioneer Henry Ford is best known for his efficiency-focused assembly line automation and for creating an attainable new means of transportation. However, it was not the precepts of automation that Ford relied upon, but his premise that, "You can take my factories, burn up my buildings, but give me my people and I'll build the business right back again" (Ford, n.d., p. 1). The human condition, inclusive of empathy, should not cease in the workplace, but instead is of primary import as "What will distinguish those who thrive, will be their ability to understand what makes their fellow woman or man tick, to forge relationships, and to care for others" (Pink, 2005, p. 65).

Moreover, effective educational leaders, particularly principals, are the primary shapers

of their school's culture (Daniëls et al., 2019; Dös & Savas, 2015; Malone & Caddell, 2000; Supovitz et al., 2010). Effectual principals are adequately self-aware, embracing the onus of responsibility that positive change within their schools is their job (Whitaker, 2012, p. 22), and an opportunity to establish mutual trust between principal and teachers (Supovitz et al., 2010). Trust has been described as the lubricant of organizational functioning and allows teachers and educational leaders the opportunity to collaborate toward common goals, ensured by genuine goodwill and positive intentions betwixt the two (Brezicha & Fuller, 2019; Tschannen-Moran, 2004).

Relationships are crucial in the educational setting, as many educators have heard the oft-cited phrase of relational importance, "They may forget what you said—but they will never forget how you made them feel" (Buehner, 1971, p. 244). Social-emotional learning, and its fundamental necessity in leadership, are now well-established. Valuing people is a core principle of leadership, hence, utilized here as leaders seek to understand staff via motivational theory (Baldrige, 2019).

Responsibility, Stress, and Illness

In terms of the TJSQ, responsibility is the "desire to be accountable for one's work, to help one's students learn, and the opportunity to take part in policy or decision-making activities" (Lester et al., 2014, p. 159). Schools can influence meaningful teacher engagement, responsibility, and accountability by effectively involving teachers in meetings and professional development, routine faculty meetings, and policy and professional development efforts, as well as via provision of common forums for sharing of best practices, pooling of resources, and collaboration (Konu et al., 2010; Lester et al., 2020; Louis et al., 2010; Margolis & Nagel, 2006; Skaalvik & Skaalvik, 2014). As reported previously, teacher leadership opportunities provide a

vehicle for increased responsibility and presence, where a teacher may exert influence on peers, leadership, and stakeholders to improve instruction and best practices, by being loosed to concentrate on the big picture (Fisk-Natale et al., 2016; York-Barr & Duke, 2004). Teacher-leaders take risks in accepting such uncertain roles, risks that can be mitigated by non-competitive, collaborative, positive school cultures (Fisk-Natale et al., 2016, p. 41).

While accountability can be rewarding, it is often perceived in a negative light. Accountability in the workplace often translates to stress, which is defined as "physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker" (CDC, 1999, para. 1). Moreover, workload and time constraints were strong predictors of emotional exhaustion and/or burnout (Betoret & Artiga, 2010; Fernet et al., 2012; Skaalvik & Skaalvik, 2017). Historically, nearly 40% of U.S. educators exit the field before reaching the five-year service mark (Chang, 2009; Skaalvik & Skaalvik, 2017), and sadly, most teachers leave the educational arena prior to retirement age (MacDonald, 1999).

Stress

Like other professions, the teaching profession is commonly known to be stressful and typified by varied opposition, encumbrances, long days, behavioral uprisings, and a deficiency of self-rule (McCarthy, 2019, p. 8). These and other factors have unintended consequences, where student achievement is negatively correlated with job-related stress (Banerjee, 2016; Kalyva, 2013). Unsurprisingly, an inverse relationship exists between job satisfaction and occupational stress, indicating that at least among primary teachers, "high levels of occupational stress correspond to low levels of job satisfaction" (Pepe et al., 2017, p. 399).

Stress has increased for teachers since 1985, when only 36% of teachers described great

stress on several days per week. However, morale was described as low. Some 28 years later

(("MetLife survey of the American teacher," 2013), over half of teachers (51%) described

themselves as under "great stress" at least several days per week. Moreover, 59% of elementary

school teachers described great stress compared to middle school and high school teachers, who

reported 44% and 42% of the time, respectively. Longitudinally, the percentage of elementary

teachers describing themselves as under great workplace stress in 1985 (35%) grew to 59% in

2013 ("MetLife survey of the American teacher," 2013, p. 45).

Illness

Sadly, many teachers suffer from "emotional exhaustion"; operationally defined as a

"loss of energy, debilitation, chronic fatigue, and the feeling of being worn out" (Skaalvik &

Skaalvik, 2017, p. 154; see also Pines & Aronson, 1988; Schwarzer et al., 2000), leading to

burnout "commonly conceptualized as a syndrome consisting of emotional exhaustion,

depersonalization, and reduced personal accomplishment" (Skaalvik & Skaalvik, 2017, p. 154;

see also Maslach & Jackson, 1981). Understandably, there is an inverse relationship between the

self-efficacy of educators and burnout (Brouwers & Tomic, 2000; Skaalvik & Skaalvik, 2007),

perceived educator health (Hakanen et al., 2006), and teacher job satisfaction (Skaalvik &

Skaalvik, 2011), where burnout is inversely related to leaving teaching (Leung & Lee, 2006).

Inadequate funding was also found to be correlated with stress, and 75% of respondents describe

their community schools as inadequately funded (Phi Delta Kappa, 2019)

Safety is a foundational human need. Therefore, ensuring workplace safety is a

prerequisite of any positive work environment (Maslow, 1959). Toxic, negative working

conditions increase stress, which may physiologically impact the victim by contributing to illness

(Geiger & Pivovarova, 2018). Moreover, workplace bullying and "exposure to conflicts, teasing,

or threats of violence" can lead to an increase in "stress, anxiety, and . . . fatigue in the victims" (Sell & Cleal, 2011, p. 16).

Role conflict results from multiple conflicting demands and ambiguous job responsibilities, resulting in chronic stress (Fisher & Gitelson). The "demand-control model" (p. 5) defines stress in terms of the level of control, where "workers exposed to high demands and low control have an increased risk for a number of diseases, notably cardiovascular diseases . . . musculoskeletal disorders, psychiatric illness, gastrointestinal illness, cancer, suicide, sleeping problems, and diabetes" (Sell & Cleal, 2011, p. 5; see also Kristensen, 1996; Theorell & Karasek, 1996). However, the mitigating effects of social support have been found to "counteract the negative effects of high job strain" (Sell & Cleal, 2011, p. 5).

Teacher job satisfaction is on the decline, notably slipping "23 percentage points since 2008, from 62% to 39% very satisfied, including five percentage points since last year, to the lowest level in 25 years" (Markow et al., 2013, p. 6). The impact of job satisfaction on the worker and the system within which they are employed is critical for both parties and would invite professional development in this area. Employee job satisfaction is inversely associated with general absenteeism (Hanebuth, 2008; Pepe et al., 2017), injury-related absenteeism (Drakopoulos & Grimani, 2013), intention to leave the workplace (MacIntosh & Doherty, 2010; Tschopp et al., 2014), counterproductive interpersonal and organizational behaviors (Mount et al., 2006), job-related stress (Boudreaux et al., 1997), psychological distress (Moen et al., 2013), and biological markers of ill-health, such as higher levels of inflammatory cytokines and other lymphocytes (Amati et al., 2010).

Stress and Attrition

Not surprisingly, a "teachers' motivation to leave the profession was positively predicted

by emotional exhaustion and negatively predicted by job satisfaction" (Skaalvik & Skaalvik, 2017, p. 154). Similarly, teacher job satisfaction had a "positive direct effect on the intention to stay in teaching" (Madero, 2019, p. 3; see also Cross et al., 1994; Janik & Rothmann, 2015; McCarthy et al., 2010) whereas, "dissatisfaction was mediated by pressures associated with test-based accountability, unhappiness with administrative support, a poor teaching career, and financial and personal reasons, in that order" Madero, 2019, p. 3; see also Carver-Thomas & Darling-Hammond, 2017).

The Work Itself

Teacher job satisfaction can be derived from the work itself, which for the purposes of this paper, is defined as an aggregate of achievement, recognition, and responsibility combined and discussed in the previous three headings (Lester, 1988; Sergiovanni, 1969). The TJSQ distills this further, describing "the work itself" as the "job of teaching or the tasks related to the job" where one has the "freedom to institute innovative materials and to utilize one's skills and abilities in designing one's work" while still possessing the "freedom to experiment and to influence or control what goes on in the job" (Lester, 1982, p. 12) Creativity and autonomy were also factors (Lester et al., 2014), and teacher control over the class is an influence as well (Gkolia et al., 2014; Madero, 2019; Ouyang & Paprock, 2006).

Bandura (1986) first defined the term ascribed to one's confidence in one's ability to accomplish goals, as self-efficacy, broadened to include "capabilities to organize and perform a specific behavior" (Gkolia et al., 2014, p. 327; see also Bandura, 1986, 1997; Staples et al., 1999). This perception does not necessarily indicate actual ability or skillset, but instead, the perception of and confidence in such.

Theoretical Approach

There are two theoretical approaches woven throughout this paper: (a) Maslow's hierarchy of needs and (b) Herzberg's two-factor or motivation-hygiene theory.

Maslow's Hierarchy of Needs

Abraham Maslow was a pioneer in the field of human motivation and whose seminal work, Maslow's need hierarchy theory, is "the most widely studied and understood content theory of motivation, particularly in organizational texts" (Fiore, 2013, p. 69). In it, Maslow described his well-known pyramid, the hierarchy of needs, stating, "There are at least five sets of goals, which we may call basic needs. Briefly, these basic needs are physiological, safety, love, esteem, and self-actualization" (Maslow, 1943, p. 394). There exist "multiple determinants" of any given behavior as "Within the sphere of motivational determinants any behavior tends to be determined by several or all of the basic needs simultaneously rather than by only one of them" (Maslow, 1943, p. 390), admitting that individual difference in one's values is a "basic problem" . . . "in any definitive motivational theory" (p. 395); to be further explored infra. The basic tenets of Maslow's hierarchy are as follows (Fiore, 2013, pp. 69-71; Figure 5):

1. Physiological needs—the most basic level of needs, including food, water, and shelter

2. Safety needs—the need to feel free from threats and protected against all danger

3. Social needs—including love, affection, friendship, and a sense of belonging

4. Esteem needs—consisting of self-respect and for expression of respect and appreciation from others

5. Self-actualization needs—to realize one's potential

6. Transcendence—spirituality and looking to the needs of others.

Figure 5

Maslow's Hierarchy of Needs

Source. https://www.interaction-design.org/literature/article/maslow-s-hierarchy-of-needs.
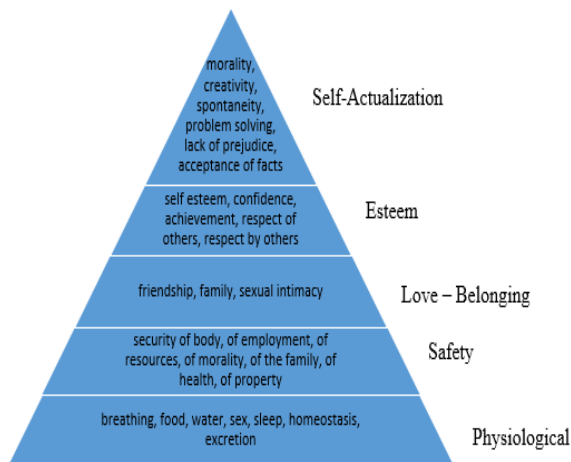
Maslow (1943) asserted a hierarchy, an order of behavioral and motivational operations, positing, "Undoubtedly these physiological needs are the most prepotent of all needs," expounding, a human being devoid of basic needs is more inclined to seek to gratify "physiological needs more than any others" (p. 373). Maslow (1943) added, "It is quite true that man [humankind] lives by bread alone-when there is no bread. But what happens to man's desires when there is plenty of bread, and when his belly is chronically filled" (p. 375).

In sum, Maslow asserted a preoccupation of one's current motivational state as "For the man who is extremely and dangerously hungry, no other interests exist but food" (Maslow, 1943, p. 374; see also Maslow, 1966). However, the targeted culmination of this motivational theory is described in terms of satisfaction, asserting, "Even if all these needs are satisfied, we may still often (if not always) expect that a new discontent and restlessness will soon develop unless the individual is doing what he is fitted for" (Maslow, 2013, p. 7). Such motivations are linked with vocation, citing "A musician must make music, an artist must paint, a poet must write, if he is to

be ultimately happy. What a man *can* be, he *must* be. This need we call self-actualization"

(Maslow, 2013, p. 7).

Herzberg's Motivation-Hygiene Theory

The seminal work of Herzberg et al. (1959) closely parallels that of Maslow and has

withstood the test of time to remind us of several truths regarding the world of work and

vocation, entitled the motivation-hygiene, or two-factor theory. Herzberg (1964, p. 3) described

his work, where he petitioned respondents to describe exceedingly "happy" moments at their

jobs, which he termed *job satisfaction.* Respondents identified job satisfaction factors as happy

moments but described the factors as related "to their tasks" (Herzberg et al., 2017, p. 113). The

"unhappy" moments, which led to *job dissatisfaction*, were described by respondents in terms of

the conditions surrounding doing the job (Herzberg et al., 2017).

Respondents offered as many events and corresponding antecedents that evoked

substantially altered feelings while offering descriptions and interpretations of same (Herzberg,

1964, p. 4). The study determined two types of factors that impact job satisfaction and job

dissatisfaction; motivators and hygiene factors.

Motivators and Hygiene Factors

Motivators are the job satisfiers, higher-order needs that can influence an employee to

work harder, seeking such intrinsic motivators as achievement, the work itself, responsibility,

and opportunity for advancement, which also lead to recognition and growth (Dinham & Scott,

1998; Herzberg, 1964). Hygiene factors (dissatisfiers), according to Herzberg, did not describe

"man's [humankind's] relationship with what he does"; his work, but rather dissatisfiers

described man's [humankind's] "relationship to the context or environment in which he does his

job" (Herzberg, 1964, p. 4). Hygiene factors are lower-order needs comprised of extrinsically

motivated factors such as "company policy and administrative practices, supervision, interpersonal relationships, working conditions, and salary)" (Herzberg et al., 2017, pp. 113-114) and were found to only slightly impact upon job satisfaction (Dinham & Scott, 1998; Herzberg, 1964).

The primary concept distilled from these studies is that job satisfaction and job dissatisfaction are two separate and distinct "dimensions of an individual's attitude toward work" (Fiore, 2013, p. 75). Moreover, results identified two groups: those who revolve around "personal growth" and those who seek "fair treatment in compensation, supervision, working conditions, and administrative practices" (Herzberg et al., 2017, p. 115).

Relationally, job satisfaction increased when motivation factors were satisfied. However, failure to gratify motivational factors resulted in minimal dissatisfaction (Fiore, 2013). Motivators are unipolar, and when motivators are ungratified, job dissatisfaction is not established, while decreasing hygiene factors serves only to "remove the impediments to positive job satisfaction," not to create feelings of job satisfaction" (Herzberg et al., 2017, p. 113). In short, "motivation factors contribute more to job satisfaction than do job dissatisfaction, and hygiene factors contribute more to job dissatisfaction than to job satisfaction," while the best expectation of satisfying hygiene needs is "the prevention of dissatisfaction and poor job performance" (Herzberg et al., 2017, p. 115).

The conflict of workplace hygiene is insidious, wherein the worker perceives the workplace environment as "unfair or disorganized and as such represents to him [them] an unhealthy psychological work environment"; and explaining the nomenclature for such as hygiene factors as "they act in a manner analogous to the principles of medical hygiene" (Herzberg et al., 2017, p. 113). The hygiene factors are a prerequisite of a healthy, productive

workplace, one where "Hygiene cooperates to remove health hazards from the environment of man" and where hygiene is not perceived as "a curative; it is, rather, a preventative" (Herzberg et al., 2017, p. 113).

Herzberg and Healthy Workplaces

A healthy workplace requires cleansing of hygiene issues as a foundational and preventative step, as a "Modern garbage disposal, water purification, and air-pollution control do not cure diseases, but without them, we should have many more diseases" (Herzberg et al., 2017, p. 113). Hygiene issues constitute "deleterious factors in the context of the job" which only serve "to bring about poor job attitudes"; the improvement of such "will serve to remove the impediments to positive job attitudes" (Herzberg et al., 2017, p. 113).

As deleterious factors, workers seek resolution regarding "supervision, interpersonal relations, physical working conditions, salary, company policies and administrative practices, benefits, and job security," as when "these factors deteriorate to a level below that which the employee considers acceptable, then job dissatisfaction ensues" (Herzberg et al., 2017, p. 113).

Theoretical limitations exist; as Herzberg et al. (1993) admitted, the data from the study was "disturbing to the social scientist," as questioning what people want from their jobs evoked such a myriad of varied responses (p. 109). Work attitudes ranged from the "basic need of the worker is to be treated with dignity and with an awareness of his unique personality" to the ideology that man simply "works for the almighty dollar" (Herzberg et al., 1993, pp. 108-109).

Chapter Summary

In way of review, the plight of the American teacher has been recently assessed and described in grim terms, to wit, a "portrait of broad teacher discontent" (Phi Delta Kappa, 2019). Two major theoretical approaches are interwoven throughout the entirety of this

dissertation: (a) Maslow's hierarchy of needs theory and (b) Herzberg et al.'s two-factor theory, also known as motivational theory. These theorists of human motivation give perspective to a frightening trend of teacher attrition, where "half of teachers also say they've seriously considered leaving the profession in recent years" (PDK, 2019, p. k3). Teachers elaborate upon their woeful teacher job satisfaction relating to why they leave, enumerating factors that impact upon motivation; namely inadequate pay and benefits, stress, burnout, lack of respect, conflict with school administrators and boards of education, workload, poor working conditions, and more (PDK, 2019). The pool of highly qualified teachers, which has been described as a "leaky bucket" (Learning Policy Institute, 2017 p. 1), manifesting researchers' warning that the teacher shortage is "real, large and growing, and worse than we thought" (García & Weiss, 2019, p. 1).

Last, the seminal work of Lester (1984) is utilized in this chapter and throughout to guide and organize the multivariate construct of teacher job satisfaction, as correlated with other interrelated factors including but not limited to: pay, security, colleagues, working conditions, supervision, advancement, recognition, responsibility, and the work itself (Lester, 1984), wherein the review of literature is disaggregated by category on the initial page of Chapter II. This is important, as teacher job satisfaction also reflects an educator's proclivity to exit the profession (Malinen & Savolainen, 2016; Skaalvik & Skaalvik, 2011) and reflects burnout (Skaalvik & Skaalvik, 2009) as correlated with job stress (Klassen et al., 2010). More specifically, teacher job satisfaction is inversely related to job-related stress (Boudreaux et al., 1997; Pepe et al., 2017), psychological distress (Moen et al., 2013), and absenteeism (Hanebuth, 2008), particularly when absenteeism is due to injury (Drakopoulos & Grimani, 2013).

Chapter III (Methodology) supplements the Chapter II literature review and describes the methodology utilized herein, including ethical considerations, research questions, research

design, data collection, instrumentation, reliability, validity, factor analysis, definition of factors,

and data analysis.

CHAPTER III

METHODOLOGY

Many of the phenomena we experience in education and the social/behavioral sciences are unobservable and are instead manifested through more tangible constructs. To that end, this study utilized EFA to identify and evaluate such invisible constructs, which revealed characteristics and conditions related to teacher job satisfaction.

Specifically, this study employed a mixed-methodological approach, composed of the following categories of data collection and analysis: (a) the EFA of the TJSQ (Lester, 1984), (b) two open-ended questions regarding teacher job satisfaction, and (c) the covariates of the participants.

Quantitative methods used Lester's TJSQ (1984), a Likert-scaled survey instrument venerably and ubiquitously employed in the educational field for decades. The TJSQ provided data for EFA based on the responses of participating K-12 public school teachers located within New York State and was supplemented by open-ended questions and covariate data.

Quantitative studies have been defined to involve the comparison and contrast, as well as the categorizing of data to test a hypothesis (Gall et al., 2005). This study will use ordinal data collected via the TJSQ tool, a Likert-scaled instrument. As the name implies, ordinal data may be rank-ordered in terms of higher or lower; however, the precise numerical relationship between the values cannot be known, such as in Likert scale data (Red Owl, personal communication, February 2019). Quantitative research seeks to determine if relationships exist between an independent variable (IV) and a dependent (outcome) variable (DV), occurring within a larger group or population (N). Quantitative research can take two forms, descriptive and experimental. Descriptive statistics measure participants once and look for relationships, associations, or

correlation among variables, while experimental research involves the pretest and posttest of participants to establish causality.

Qualitative studies are defined as having the researchers "study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2011, p. 3); see also Creswell & Poth, 2018, p. 7). Generally, quantitative researchers utilize a small number of variables and many cases, while qualitative researchers conversely delve into fewer cases, but with many variables.

Mixed methods research, an integration of both, is "practical" as "the researcher is free to use all methods possible to address a research problem" (Creswell & Plano Clark, 2018, p. 13), as well as leveraging and harnessing "strengths that offset the weaknesses of both quantitative and qualitative research" (Creswell & Plano Clark, 2018, p. 12).

The purpose and process for conducting this study will be presented next, including the research questions. EFA will be utilized as a methodology to "discover" factors or themes that impact a teacher's job satisfaction, as such factors have an influence upon the teaching profession. This chapter concludes by explaining the implementation of EFA and the supplemental open-ended questions and includes the following segments: participants, instrumentation, procedures, ethical considerations, the methodological limitations, and the methods used to analyze and interpret the results.

Purpose of the Study and Research Questions

The purpose of this study was to discover the personal views of public school teachers within New York State toward job satisfaction, and to describe the underlying factors or themes, using manifest (observable) variables to explain and define the latent (unobservable) variables.

The discovery of teacher job satisfaction's underlying factors is critical to understanding how to potentially improve a teacher's satisfaction with the job.

With a potential wave of teachers exhibiting low job satisfaction, (a) identifying the contributing factors of teacher job satisfaction and (b) implementing efficacious remedies become of utmost importance. The absence of such prophetically foretells our educational destiny(ies) as a society and identifies the major categories of research addressed in this study: (a) teacher job satisfaction and (b) teacher retention. The two are closely related, as low teacher job satisfaction is one predictor of teacher attrition, and job dissatisfaction is related to leaving the teaching profession (Carver-Thomas & Darling-Hammond, 2017; MacDonald, 1999; McCarthy et al., 2010).

To that end, data was obtained from the administration of the (a) TJSQ (Lester, 1984), (b) two open-ended questions regarding teacher job satisfaction, which were not part of the TJSQ but developed for the sole purpose of this study, and (c) covariate demographic information. Mixed methods were employed to administer surveys and to gather and analyze the data to answer the following research questions:

RQ 1: What are the latent variables of teacher job satisfaction identified by K-12 public school teachers?

RQ 2: What are the strongest indicators of teacher job satisfaction of K-12 public school teachers?

RQ 3: What factors exist to reveal K-12 public school teachers' perspectives related to teacher job satisfaction?

Exploratory Factor Analysis Background and Context

In 1904, psychologist and statistician Charles Spearman developed and is credited as the first person to use EFA, a method utilized to "identify linear functions or factors, which explain the theoretical maximum amount of remaining common variance in a correlation" (Grimm & Yarnold, 2010, p. 129). Spearman utilized EFA to identify patterns and correlations between unseen structures (variables) of general intelligence (Red Owl, personal communication, February 2019). Spearman posited that an underlying factor, general intelligence (G), was responsible for one's ability to perform on intelligence tests. As this is an invisible construct, he set out to statistically prove his theory to the scientific community and employed a new statistical technique, originally termed factor analysis, but known today as EFA, defined above.

EFA is best described heuristically, where a latent variable, one unobserved and unmeasurable such as the wind, can be statistically defined and measured; operationalized using manifest variables. Manifest variables can be observed and are measurable, depicted in our heuristic example as blowing hair, blowing leaves, a blowing flag, or jingling wind chimes (Red Owl, personal communication, April 2019).

EFA can be used as a statistical data reduction technique or to create instruments and metrics. This study used EFA to explain the relationship of many observed (manifest) random variables via a small number of latent (unobserved) variables or eigenvectors, termed *factors* (Grimm & Yarnold, 2010; Red Owl, personal communication, March 2019; Salkind, 2010). In short, EFA is utilized to describe correlations among variables in such a way as to identify patterns for exploratory purposes. EFA is a "tool for theory building," whereas confirmatory factor analysis (CFA) "represents a tool for theory testing" (Grimm & Yarnold, 2010, p. 107).

Variance is a "fundamental assumption" in EFA; distilled into three types: (a) common variance, which refers to the total variance that correlates, or is "shared with other variables in the analysis," (b) specific variance, the "portion of the total variance which does not correlate with the other variables," and (c) error variance, which reflects "inherently unreliable random variation" (Grimm & Yarnold, 2010, p. 107).

Initial, Unrotated Factor Solution

The initial, unrotated factor solution uses the data set collected from the TJSQ after executing a factor analysis. These factors are (a) latent, "discovered" through factor analysis, (b) not part of the original data set, (c) can explain an amount of variance (information) in the dataset, represented in the "proportion" column of output, and (d) calculated using the covariance (correlation) between the manifest variables from the data set.

The factor solution produces the same number of factors as variables in the original data set, that is, the 66 TJSQ items. For example, the TJSQ data was entered to perform a correlation matrix, which gives the researcher a picture of the correlation between the variables. Smaller data sets can be visibly inspected with ease. However, the 66 variables of the TJSQ would produce 2,145 correlations whereas $[n = (K * (k − 1)) / 2 = 66 * 65) / 2 = 2,145]$, which is quite impractical to interpret (Red Owl, personal communication, March 2019), necessitating EFA.

Factor Rotation

The initial factor analysis requires a different angle of metaphorical view, where the perspective of view, not the data, changes. Factor rotation takes one of two forms: (a) orthogonal rotation or (b) oblique rotation. Orthogonal rotation, the most common type, uses variance maximization (varimax) to produce uncorrelated factors, while oblique rotation uses promax or oblimin to produce correlated factors (Red Owl, personal communication, March 2019).

Extracting Factors

To determine the number of factors to extract and retain for rotation and further analysis, three a priori rules were established (Kaiser, 1958; Red Owl, personal communication, March 2019):

- Set a minimum required level of explained variance (i.e., 75%), and extract a sufficient number of factors to cumulatively explain.

- Following the Kaiser rule, extract factors with eigenvalue ≥ 1 (but modify the rule to extract factors with eigenvalues approaching 1, which are likely to have eigenvalues > 1 after rotation).

- Extract the number of factors above the elbow in the scree plot of the unrotated factors.

The extracted factors were subjected to varimax orthogonal rotation with Kaiser normalization, and factor scores for each participant for each factor were saved to the data set. To interpret and label the factors, an a priori factor loadings cutoff criterion was established as lambda ≥ |±.30.

Extraction of Factors

Each factor explains a portion of the variance in the dataset. An inspection of the "proportion" column was conducted to describe the amount or proportion of variance (information) explained by each discovered factor and to then identify the number of factors to extract and analyze (Red Owl, personal communication, April 2019). The number of factors extracted was determined by summing a sufficient number of factors to explain 75% of the data, cumulatively, preset as criteria by the researcher.

Eigenvalues

Eigenvalues (λ) are an index depicting "a portion of the total variance of a correlation matrix that is explained by an eigenvector" (Grimm & Yarnold, 2010, p. 128) or a measure of variance explained by specific factors (Red Owl, personal communication, April 2019). Eigenvalues can be computed by squaring the factor loadings and then summing them to identify larger eigenvalues, explaining more variance than smaller ones and indicating the percentage (proportion) of variance explained by each factor.

Factor Loadings

Factor loadings are the correlation between a variable and a factor, where the variance explained by a given factor is the square of that variable's factor loading. A factor loading of 1.00 depicts a factor that explains 100% of the information.

An aggregate "cumulative" measure allows the researcher to see cumulative explanations of the factors' impact upon the data set. This enabled the researcher to establish a cutoff, where a factor's impact upon the data set is negligible.

Two variable constructs, uniqueness (U) and communality (h2), are foundational in EFA. A variable's uniqueness refers to the portion of total variance that is unrelated to other variables (i.e., uniqueness − specific variance = error variance) (Grimm & Yarnold, 2010, p. 107). Communality is the reciprocal and refers to the proportion of the total variance that is related to other variables and often confused with commonality, calculated as "1 − the uniqueness" (p. 107).

Kaiser's Rule

Henry Kaiser was yet another contemporary of Spearman at the University of Illinois and discoverer of Kaiser's rule, also known as the latent root criterion. Kaiser's rule is the second

means to determine the number of factors to extract in EFA, specifically applying a "stopping rule," which uses eigenvalues ≥ 1 to allow the inclusion of factors that explain at least as much variance as a single variable (Grimm & Yarnold, 2010, p. 130; see also Kaiser, 1958).

Scree Plot

Raymond Cattell was a British-born psychologist who observed the horrors of World War I while growing up in England, and therefore, vowed to use science to help solve the problems of humanity. In 1945, Cattell began a research department at the University of Illinois and worked together with Charles Spearman to pioneer the use of computers in conducting factor analysis, paving the way for much larger scale research in the scientific community. In his EFA research, Cattell quickly identified the problem, positing "Psychology appeared to be a jungle of confusing, conflicting, and arbitrary concepts" (Cattell, 1965, p. 14), purporting a "brief, easily applicable test for determining the number of factors to extract in factor analytic experiments has long been in demand" (Cattell, 1966, p. 245). Cattell believed that EFA could be applied to the social sciences to identify underlying constructs of personality.

Cattell invented the scree plot of eigenvalues, which presents factors on the *x*-axis, and eigenvalues on the *y*-axis, allowing a visual inspection of the eigenvalues and providing a third stopping rule, which determines the number of factors to rotate. The name "scree plot" is derived from the image it depicts, where the steep portion represents a cliff, and the flat area below constitutes rubble, also known as "scree." Scree plot factors are selected and retained above the "elbow" (i.e., "the path of steep descent") and explain the largest amount of variance. The factors located where the curve's slope levels off are discarded as rubble (Grimm & Yarnold, 2010, p. 132).

Likert Scales

      A Likert scale is a psychometric scale invented by social psychologist Rensis Likert in 1932 as a doctoral student at Columbia University. Likert's scale was useful for attitudinal measures, where he averaged scores from survey questions he termed "items." Likert's scale has been established as the standard for survey questionnaires. Survey participants (respondents) describe the level of agreement or disagreement with an item in the range of intensity (Barua, 2013; see also Likert, 1932).

Participants

      Participants in this study totaled 129 K-12 public teachers, where 95 (75.64%) were female, and 34 (26.36%) were male. Further demographic information described all participants as located within the sample region, defined as Ulster, Dutchess, Orange, Rockland, and Putnam counties of New York State. The highest degree achieved is reported, where 112 (86.82%) reported having a master's degree, 12 (9.30%) had an advanced certificate/degree, and five (3.88%) had a doctorate (Figure 6).

Figure 6

Participants' Highest Degree Achieved
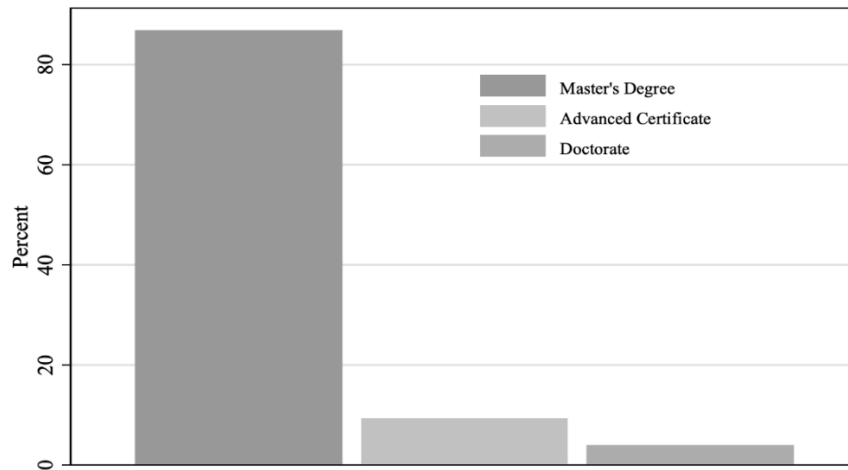
Note: New York State requires teachers to earn a master's degree within five years of initial certificate.

Moreover, teachers were well represented by this sample as participants possessed diverse teaching experience, measured by years of service. Of the study participants, 24 (18.60%) teachers had 5-10 years of experience, 21 teachers (16.28%) had 11-15 years of experience, 30 teachers (23.26%) had 16-20 years of experience, 17 teachers (13.18%) had 21-25 years of experience, and the largest grouping, 37 teachers (28.68%), had 26-30 years of experience (Figure 7).

All participants were volunteers, remained anonymous, and were offered no compensation. Participants were notified about the study's intent, purpose, and benefits.

Figure 7

Participant Teachers' Experience in Years
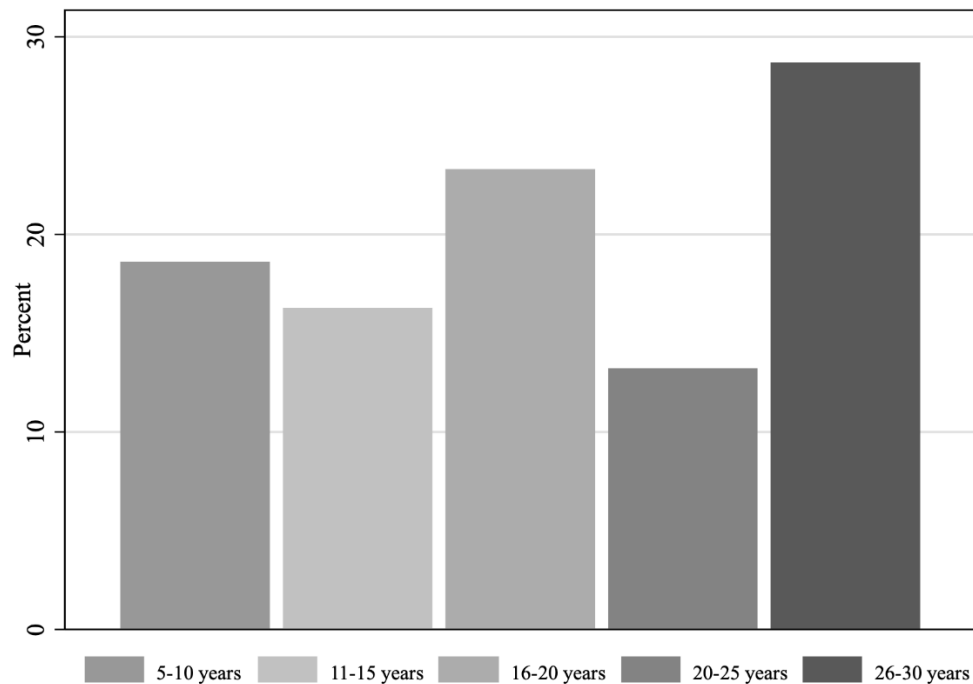
Research Design and Implementation of EFA

EFA was deemed most appropriate to identify and measure the underlying themes (structures) of teacher job satisfaction to reveal the latent variables. The types of data utilized determined research design and instrumentation. In this study, categorical data were employed, also known as nominal data, Latin for "name." Examples of categorical data include political party, ethnic group, or treatment and control group (Red Owl, personal communication, April 2019). The instrument utilized in this research, the TJSQ (Lester, 1984; see also Lester, 1982, 1987), was electronically disseminated to the teacher population, and the categorical data produced was analyzed via EFA.

TJSQ data was entered to perform a correlation matrix, which gives the researcher a picture of the correlation between the variables. Smaller data sets can be visibly inspected with ease. However, the 66 variables of the TJSQ would produce 2,145 correlations [$n = (K * (k − 1))$

/ 2 = 66 * 65) / 2 = 2,145], which is quite impractical to interpret (Red Owl, personal

communication, March 2019).

Due to complexities, the researcher utilized EFA to identify patterns or themes in

correlations termed factors. EFA is best described heuristically, where a latent variable (factor),

one unobserved and unmeasurable such as the wind, can be statistically defined and measured;

operationalized using manifest variables. Latent variables (factors) would also include behavior,

intelligence, attitude, and the like from the fields of education and social sciences, inferred and

indirectly measured via EFA.

Manifest variables can be observed and are measurable, depicted in our heuristic example

(e.g., blowing hair, blowing leaves, blowing flag, ringing chimes). Latent variables are

represented by circles or ovals, whereas manifest variables are depicted by rectangles for

statistical purposes. (Red Owl, personal communication, April 2019).

For this study, 66 Likert-type scale items regarding teacher job satisfaction perceptions

were administered on a 6-point scale. The type of data determines options for statistical analyses,

as the data analyzed are assumed to represent an underlying continuum, therefore analyzed in

this study as continuous, interval-level data.

Factor score variables were produced through the EFA and subsequently used as the

dependent variables in independent samples t-tests. The factor variables were measured on a

scale based on the normal distribution and were centered on $M = 0$ with intervals reflecting

standard deviation units where $SD = 1$. The Likert-type items and the factor variables are

described in more detail in the presentation of Chapter IV, Results of this study.

Stata/IC version 17.1 was utilized to perform all the statistical analyses and to create the

graphs in this study. The Stata add-on program sort1.ado (Enzmann, n.d.) was used to produce a

sorted factor loadings table and the Stata add-on program factabexcel.do (Red Owl, personal

communication, March 2019) and enhance the sorted loadings table to export it to Excel.

Microsoft Excel version 2010 was used for formatting the tabular data.

Data Analysis

Instrumentation: TJSQ

The purpose of this study was to obtain and analyze data relevant to teacher perceptions

of their job satisfaction utilizing (a) the TJSQ, which consists of 77 items, inclusive of 11 filler

items, yielding 66 items (see Appendix A), (b), 2 open-ended questions, supplemental to the

TJSQ, but unaffiliated with the TJSQ in any manner, and (c) covariate data.

The TJSQ identifies nine themes of teacher job satisfaction: pay, security, colleagues,

working conditions, supervision, advancement, recognition, responsibility, and the work itself

(Lester, 1984). The seminal works of both Maslow (1943) and Herzberg et al. (1959) are infused

throughout the TJSQ and deemed appropriate, even crucial, in defining teacher job satisfaction.

This survey is estimated to require a median (Mdn) time of 20 minutes to complete, and

permission was granted from Lester (1984), its creator, and is on file in Appendix B of this

study. Participants had the option to withdraw from the survey at any time without any

explanation or consequence, without retaliation or any negative impact. Participants were not

subjected to harm or questioning that gave any indication of causing stress to participants or

considered upsetting, intrusive, or offensive in any manner.

Open-ended Questions and Covariates

In this mixed-methods study, qualitative data were collected to enhance the quantitative

analysis utilizing open-ended questions (section "b"), which pertain to teacher job satisfaction

and were added after the TJSQ (Lester, 1984) as completed by participants. In addition,

demographic questions were asked to reveal the covariates within the study (Section "c").

Open-ended Questions

The following are the open-ended questions created uniquely for this study; separate,

distinct, and unaffiliated with the TJSQ:

1. Please explain why you are satisfied with your teaching job.

2. Please explain why you may not be satisfied with your teaching job.

Covariate Demographic Information

The following are the demographic data collected for this study:

- Gender (male/female/other)

- Education level (BA, MA, advanced certificate/degree, doctorate degree)

- Content area of instruction (art, business, ESL/ENL/MLL, English/ELA, FACS,

  mathematics, music, science, social studies, technology, world languages)

- Years of teaching experience (5-10 years, 11-15 years, 16-20 years, 21-25 years, 26-30

  years, more than 31 years)

TJSQ Reliability/Validity

According to Lester et al. (2014), reliability for the TJSQ instrument was 0.93, indicated

by the Cronbach's alpha coefficient, while coefficients of internal consistency are "0.92

(supervision), 0.82 (colleagues and work itself), 0.83 (working conditions), 0.80 (pay), 0.73

(responsibility), 0.81 (advancement), 0.71 (security), and 0.74 (recognition)" (Lester et al., 2014,

p. 158; see also Lester, 1982). The range for coefficients for scales is from "0.71 (security) to

0.92 (supervision)" whereas the "alpha coefficient for each factor, means, standard deviations,

and alpha, if item deleted, are provided in tabular form" (Lester et al., 2014, p. 158; see also

Lester, 1982, 1984, 1987).

    Moreover, "content validation was performed through a panel of judges," which reduced

the number of items from 120 to 77, and where "statements with less than 80% agreement were

either rewritten or rejected" (Lester et al., 2014, p. 158).

    Additionally, the items "were edited in a form specifically geared to teachers in an

educational setting," providing for clear definitions, and where response set bias was avoided as

approximately half were written in "positive form," while approximately half were written in

"negative form," and construct validity was obtained through factor analysis (Lester et al., 2014,

p. 158).

TJSQ Factor Analysis

    According to Lester (1984), a "nine-factor orthogonal varimax solution was accepted

using the criterion of eigenvalues greater than or equal to unity," whereas the nine factors are

identified as:

> 14 items on supervision (19, 73, 47, 11, 27, 71, 52, 34, 65, 70, 14, 62, 6, and 56); 10
>
> items on colleagues (22, 57, 77, 17, 48, 35, 43, 63, 60, and 45); 7 items on working
>
> conditions (64, 20, 40, 18, 31, 29, and 10); seven items on pay (53, 2, 72, 42, 67, 5, and
>
> 76); 8 items on responsibility (75, 69, 74, 44, 24, 39, 21, and 61); 9 items on work itself
>
> (30, 28, 51, 33, 8, 3, 54, 13, and 55); 5 items on advancement (59, 37, 1, 23, and 9); 3
>
> items on security (25, 15, and 32); and 3 items on recognition (16, 7, and 58). The
>
> following 11 items had factors loadings below 0.30 (4, 12, 26, 36, 38, 41, 46, 49, 50, 66,
>
> and 68), and therefore, were not included in any further statistical analysis. They are filler

items. Factor loading, communalities, item reversals, eigenvalues, etc., are reported.

(Lester et al., 2014, p. 158; see also Lester, 1982, 1984, 1987)

TJSQ Definitions of Factors

Lester (1982) further distilled the TJSQ factor definitions (Table 1) to the following

operational definitions as they appear in the actual TJSQ instrument (Lester, 1982, TJSQ

Manual, p. 12).

Table 1

Definition of Nine Final Factors of Teacher Job Satisfaction Questionnaire

Factor	Definition
Supervision	The task-oriented behavior and person-oriented behavior of the immediate supervisor.
Colleagues	The work group and social interaction among fellow teachers.
Working Conditions	The working environment and aspects of the physical environment.
Pay	Annual income.
Responsibility	The opportunity to be accountable for one's own work and the opportunity to take part in policy or decision-making activities.
Work Itself	The job of teaching or the tasks related to the job. The freedom to institute innovative materials and to utilize one's skills and abilities in designing one's work. The freedom to experiment and to influence or control what goes on in the job.
Advancement	The opportunity for promotion.
Security	The school's policies regarding tenure, seniority, layoffs, pension, retirement, and dismissal.
Recognition	Some act of notice, blame, praise, or criticism.

Procedure

This current study's proposal was submitted to the Long Island University institutional

review board (IRB) and approved on April 29, 2021 as "exempt." Subsequent to IRB approval,

the study was shared electronically via Google Forms to a sample derived from listservs and

emailed to superintendents or designees to determine interest.

Once the data were collected, (a) EFA was utilized to explore the themes (factor

structure) of the questionnaire in this population while Cronbach's alpha will be used to assess

the internal consistency of questionnaire subscales, while (b) subsequent to completion of the

TJSQ (Lester, 1982), two supplemental, open-ended questions were asked of each participant, to

gain additional information.

These questions were posed only after the successful completion of the TJSQ (Lester,

1984). These open-ended questions appear in this chapter under the heading Open-ended

Questions. The TJSQ, the two open-ended supplemental questions, and demographic questions

were also collected electronically using Google Forms and analyzed using Stata/IC Version 17

and Microsoft Excel version 10 for the development of graphs and tables.

Ethical Considerations

The Long Island University IRB approved this study on April 29, 2021 as "exempt," as

subjects in this study did anonymously and voluntarily participate by completing a survey and

were fully permitted to withdraw from the study at any time.

This research had no foreseeable risks to the potential participants, and all data gathered

will remain anonymous. Therefore, participants will not be identifiable. The procedures and

questions used in this survey presented no foreseeable offense or harm to the participants of any

culture and were not considered stressful, upsetting, or intrusive. Participants were informed of

the legal prescription of data destruction and were asked if their EFAs and open-ended questions

could be used for analysis prior to selecting the submit button within the survey.

In addition to the study invitation, participants were queried to grant permission

regarding participant responses, which the researcher intends to publish with this dissertation.

Participants involved in the study did anonymously access the study with a provided URL link to

Google Forms.

This survey took an estimated 20 minutes to complete. Participants had the option to withdraw from the study at any time without any explanation or consequence, without retaliation or any negative impact. The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Methodological Limitations

The methodological limitations of this EFA study included the "level of subjectivity stemming from the many methodological decisions a researcher must make to complete a single analysis, with the accuracy of the results largely dependent upon the quality of these decisions" (Beavers et al., 2013, p. 1; see also Henson & Roberts, 2006; Tabachnick & Fidell, 2001).

Moreover, EFA cannot be utilized to "confirm a theory or draw any statistically verifiable conclusions" but is instead used for exploratory purposes; what "might be" rather than "what is" (Red Owl, personal communication, January 2020). EFA is a "tool for theory building," whereas CFA "represents a tool for theory testing" (Grimm & Yarnold, 2010, p. 107). Factor analysis can indeed be used to confirm a theory but in the form of CFA or item response theory.

In Chapter IV (Data Analysis), the findings of EFA are presented. As such, they represent the influence upon nine factors (i.e., pay, security, colleagues, working conditions, supervision, advancement, recognition, responsibility, and the work itself) (Lester, 1984), and as analyzed in Stata, v. 15.1.

CHAPTER IV

RESULTS

This chapter presents the findings of EFA and the qualitative responses to discover factors or themes that impact a teacher's job satisfaction. Many phenomena in education and the social/behavioral sciences are unobservable and subjective; therefore, to reveal these phenomena, this study employed EFA to allow the unseen to be analyzed and interpreted. Section I discusses the results from EFA and then interprets the factors in conjunction with the qualitative responses to enrich and enhance the subjective interpretation of each factor, while Section II looks more deeply at the six factors and investigates whether two sets of data, compared by their observed means, are most likely derived from the same distribution or population.

Factor Analysis

Six factors were discovered using the following criteria: (a) a visual inspection of the scree plot, (b) Horn's parallel analysis, (c) application of the modified latent root criterion (Kaiser's rule) where EV ≥ 2.0, and (d) consideration of the proportion of explained variance of the factors. The factors were extracted and rotated orthogonally using the varimax technique with Kaiser normalization.

To interpret the factors, I used a cutoff criterion for factor loadings of $\lambda \geq |\pm.40|$, consistent with conventional practice in factor analysis. Factor loadings that meet the cutoff criterion are color-highlighted and were treated as weights in the process of interpreting the factors.

For this study, 66 Likert-type scale items of teacher job satisfaction perceptions were administered in a 6-point scale, a scale assumed to represent an underlying continuum, so they were analyzed as categorical data. The data set was loaded from Excel, using survey data

obtained via Google Forms. An initial unrotated factor analysis was conducted, yielding 11

factors with eigenvalues ≥ 1.0, which describe 79.47% of the variance. Following the initial

factor analysis, a scree plot from the unrotated factors was used to conduct a visual inspection to

determine the number of factors to extract (Figure 8). Upon inspection using Cattell's rule

(Cattell, 1966), 7 factors met initial criteria for retention, but within the cluster of factors 7

through 10 raised a question and most likely would not have provided differentiation. Therefore,

eigenvalues ≥ 2.0 were used as a criterion to retain six factors for further inspection and analysis.

Figure 8

Scree Plot
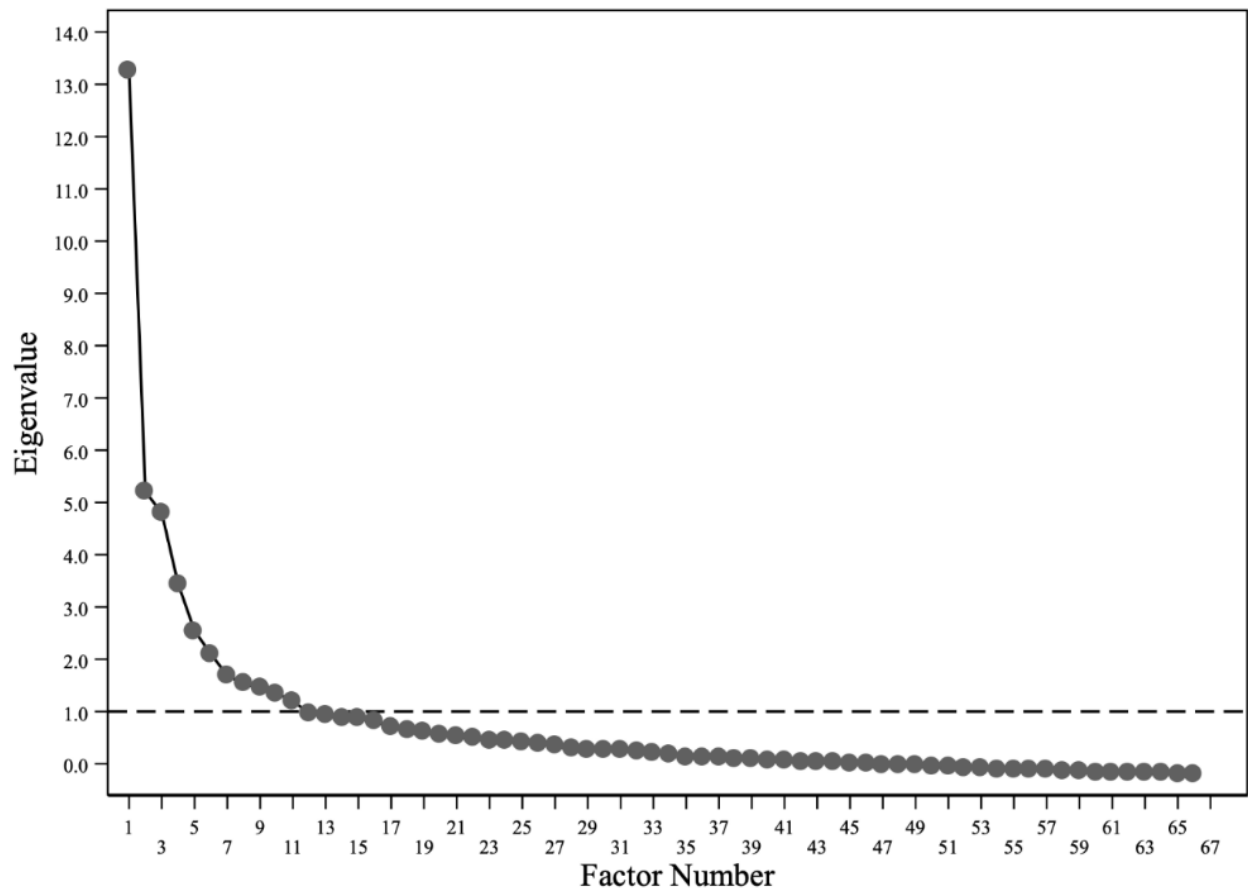
Six factors extracted in this study had eigenvalues ≥ 2.0. To determine the number of principle factors expected beyond chance, Horn's parallel analysis (HPA) was employed, resulting in only six factors that exceeded the number of factors expected by chance alone.

HPA, which compares adjusted and unadjusted eigenvalues (Table 2), was discovered by Horn (1965). Horn argued that the number of factors should not simply be determined by the popular eigenvalue ≥ 1.0 criterion (Kaiser, 1958, p. 6), but instead by computer simulation, which produced random factors and eliminated potential subjective bias (Horn & McArdle, 1980). In short, HPA runs 30 simulated cases for each item or 30(66) in this case; 1980 calculations to determine if by chance alone.

Horn's technique evaluates components, also known as common factors, as they are retained in a principal component analysis (PCA) or a common factor analysis. Horn described non-correlated data, which can be interpreted in a non-collinear manner, resulting in PCA eigenvalues equal to 1.0, although sampling error can reveal factors greater than or less than 1.0 (Stata v 17, help file).

As a result of HPA, six factors emerged as identified by the adjusted eigenvalues. The adjusted eigenvalue of factor 6 is .69. Therefore, it was included as approaching 1.0. These factors did not occur by chance alone and are depicted comparatively in Figure 9.

Table 2

Results of HPA for Principal Factors 1980 Iterations, Using the Mean Estimate

Component or Factor	Adjusted λ	Unadjusted λ	Estimated Bias
1	11.32	13.50	2.18
2	3.37	5.46	2.09
3	3.01	5.01	1.99
4	1.94	3.72	1.78
5	1.07	2.81	1.74
6	0.69	2.37	1.68
7	0.43	1.96	1.53
8	0.31	1.84	1.52
9	0.27	1.74	1.47
10	0.30	1.64	1.34
11	0.12	1.45	1.33
12	0.00	1.25	1.25
13	0.06	1.24	1.17
14	0.05	1.17	1.12
15	0.06	1.14	1.08
16	0.07	1.11	1.03
17	0.02	0.98	0.96
18	0.07	0.97	0.90
19	0.03	0.89	0.86
20	0.01	0.84	0.83
21	0.04	0.81	0.77
22	0.02	0.76	0.75
23	0.00	0.72	0.71
24	0.04	0.71	0.67
25	0.04	0.68	0.64
26	0.06	0.66	0.60
27	0.02	0.61	0.60
28	-0.02	0.56	0.58
29	0.03	0.54	0.51
30	0.06	0.53	0.48
31	0.10	0.52	0.42
32	0.13	0.52	0.39
33	0.12	0.47	0.35
34	0.13	0.44	0.31
35	0.15	0.41	0.26
36	0.14	0.38	0.24
37	0.15	0.37	0.23
38	0.16	0.37	0.20
39	0.20	0.35	0.15
40	0.21	0.34	0.13
41	0.21	0.31	0.10
42	0.24	0.30	0.06
43	0.24	0.28	0.04
44	0.26	0.27	0.00
45	0.26	0.25	-0.01

Figure 9

Horn's Parallel Analysis
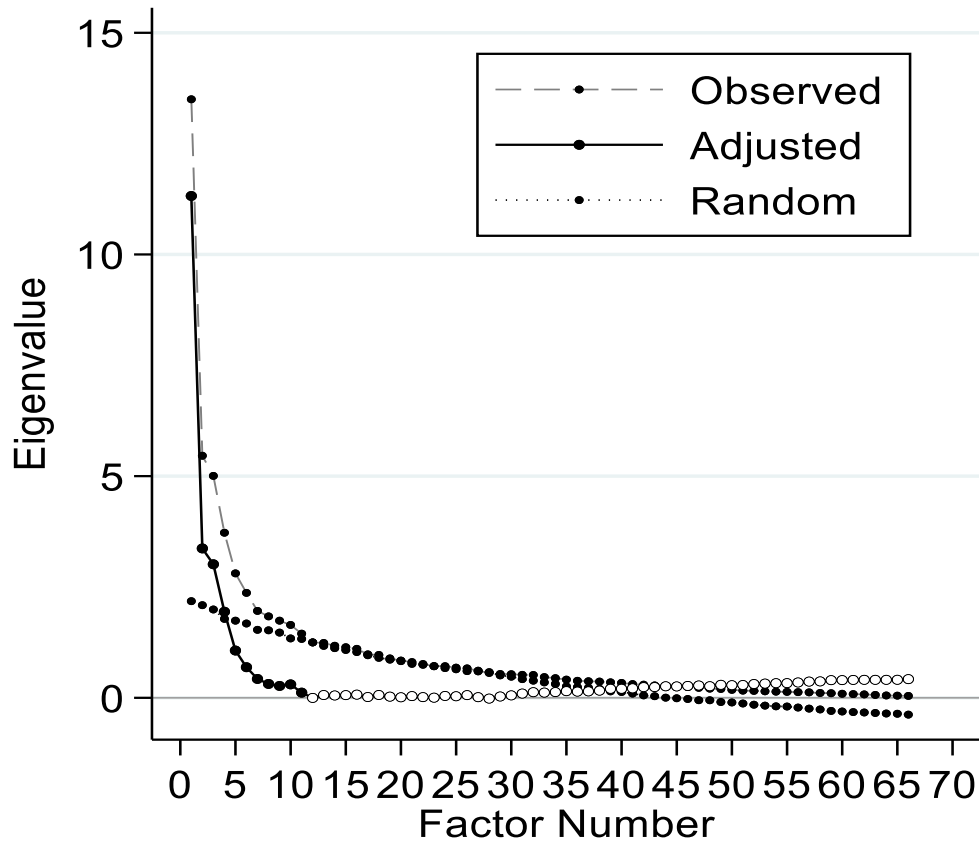
EFA was conducted, and six factors were rotated using varimax orthogonal rotation with

Kaiser normalization, and are described in Table 3 by factor, eigenvalue (λ), difference (diff.),

proportion (prop.), and cumulative (cum.) with six factors retained resulting in 64.63% of the

variance explained. The results indicate that factor 1 accounted for 18.93% of explained

variance, factor 2 explained 10.93% of the variance, factor 3 explained 10.50% of the variance,

factor 4 explained 9.11% of the variance, factor 5 explained 8.38% of the variance, and factor 6

explains 6.77% of the variance.

Table 3

Six Factors Rotated Using Varimax Orthogonal Rotation with Kaiser

Factor	λ	Diff.	Prop.	Cum.
Factor1	9.18	3.88	0.19	0.19
Factor2	5.31	0.21	0.11	0.30
Factor3	5.10	0.68	0.11	0.40
Factor4	4.42	0.35	0.09	0.49
Factor5	4.07	0.78	0.08	0.58
Factor6	3.28		0.07	0.65

A variable's uniqueness refers to the portion of total variance that is unrelated to other variables (i.e., uniqueness − specific variance = error variance) (Grimm & Yarnold, 2010, p. 107). Communality is the reciprocal and refers to the proportion of the total variance that is related to other variables and often confused with commonality, calculated as "1.0—the uniqueness" (p. 107).

Table 4

Results of HPA for Principal Factors 1980 Iterations, Using the Mean Estimate

Item	F1	F2	F3	F4	F5	F6	h^2	Statements
q62	**0.805**	0.027	−0.005	0.157	−0.044	0.129	0.692	My immediate supervisor praises good teaching
q59	**0.786**	0.047	−0.078	0.030	−0.068	0.206	0.674	When I teach a good lesson, my immediate supervisor notices
q40	**0.759**	−0.073	−0.043	0.083	0.171	0.133	0.638	My immediate supervisor provides assistance for improving instruction
q10	**0.745**	−0.063	−0.037	0.306	−0.064	0.156	0.682	I receive recognition from my immediate supervisor
q60	**0.741**	0.058	−0.002	−0.088	0.003	0.078	0.566	My immediate supervisor explains what is expected of me
q31	**0.724**	0.126	−0.039	0.021	0.009	−0.003	0.542	My immediate supervisor treats everyone equitably
q17	**0.723**	−0.001	0.061	−0.009	−0.121	0.060	0.545	My immediate supervisor gives me assistance when I need help
q24	**−0.671**	−0.053	0.161	−0.039	0.267	−0.021	0.553	My immediate supervisor does not back me up
q49	**−0.618**	−0.113	0.043	−0.274	0.179	−0.217	0.551	I receive too little recognition
q43	**−0.608**	−0.258	0.025	0.090	0.274	−0.190	0.556	My immediate supervisor is not willing to listen to suggestions
q53	**0.597**	0.058	−0.093	0.156	−0.148	0.097	0.424	My immediate supervisor makes available the material I need to do my best
q56	**−0.596**	−0.177	0.164	0.082	0.265	0.123	0.506	My immediate supervisor makes me feel uncomfortable
q12	**0.590**	−0.007	−0.014	−0.024	0.292	0.043	0.436	My immediate supervisor offers suggestions to improve my teaching
q47	**−0.562**	−0.066	0.233	−0.086	0.317	−0.046	0.485	I receive too many meaningless instructions from my immediate supervisor
q06	**−0.539**	−0.020	−0.114	−0.046	0.134	**−0.400**	0.484	No one tells me that I am a good teacher
q05	**−0.537**	−0.206	0.159	0.065	0.258	−0.004	0.427	My immediate supervisor turns one teacher against another
q14	**0.511**	0.025	−0.083	0.275	−0.221	**0.485**	0.629	I receive full recognition for my successful teaching
q11	**−0.404**	−0.093	0.262	−0.097	0.318	−0.113	0.364	I do not have the freedom to make my own decisions
q48	−0.073	**−0.799**	0.126	−0.112	0.235	−0.075	0.734	I dislike the people with whom I work
q15	0.028	**0.788**	0.001	0.087	−0.034	0.001	0.630	I get along well with my colleagues
q20	0.022	**0.785**	0.026	0.082	−0.009	0.125	0.639	I like the people with whom I work
q66	−0.069	**0.702**	0.009	0.034	−0.215	0.127	0.561	My colleagues seem reasonable to me
q37	−0.214	**−0.679**	0.041	0.091	0.109	−0.016	0.529	My colleagues are highly critical of one another

Item	F1	F2	F3	F4	F5	F6	h^2	Statements
q32	0.191	**0.639**	0.004	0.218	−0.008	0.064	0.496	My colleagues stimulate me to do better work
q41	−0.198	**−0.637**	0.042	−0.172	0.179	−0.094	0.518	I do not get cooperation from the people I work with
q54	−0.067	**0.567**	−0.077	0.117	0.121	0.155	0.384	I have made lasting friendships among my colleagues
q39	0.175	0.351	0.084	0.160	0.166	0.210	0.258	My colleagues provide me with suggestions or feedback about my teaching
q63	−0.041	−0.325	−0.032	−0.256	0.024	0.116	0.188	I am not interested in the policies of my school
q44	−0.063	−0.050	**0.826**	−0.040	0.027	−0.070	0.695	Teacher income is barely enough to live on
q04	−0.093	−0.124	**0.803**	0.061	−0.011	0.019	0.674	Insufficient income keeps me from living the way I want to live
q57	−0.203	0.026	**0.792**	0.057	0.012	−0.033	0.673	Teacher income is less than I deserve
q36	0.147	−0.038	**−0.791**	0.057	0.075	0.085	0.664	I am well paid in proportion to my ability
q61	−0.022	0.136	**−0.789**	−0.024	0.035	0.000	0.644	Teaching provides me with financial security
q02	0.048	0.020	**−0.787**	−0.029	0.138	0.021	0.642	Teacher income is adequate for normal expenses
q13	0.060	−0.010	**−0.563**	0.290	−0.112	0.089	0.426	Teaching provides for a secure future
q23	0.202	0.121	**0.441**	−0.201	0.307	0.054	0.387	I am afraid of losing my teaching job
q65	0.147	−0.092	−0.367	−0.099	0.263	0.169	0.272	Pay compares with similar jobs in other school districts
q25	0.127	0.055	−0.044	**0.659**	−0.167	0.087	0.491	Teaching is very interesting work
q22	−0.006	−0.043	−0.002	**0.589**	0.099	0.020	0.359	My students respect me as a teacher
q19	0.055	0.147	0.048	**0.579**	0.051	0.008	0.365	Teaching provides me the opportunity to help my students learn
q42	0.057	0.123	0.072	**0.569**	−0.216	0.078	0.400	Teaching encourages me to be creative
q30	−0.038	0.104	0.259	**−0.542**	0.309	−0.105	0.480	Teaching does not provide me the chance to develop new methods
q38	0.053	0.269	0.030	**0.510**	−0.011	0.081	0.342	I do have responsibility for my teaching
q45	−0.012	−0.315	0.045	**−0.501**	0.221	−0.079	0.407	I am indifferent toward teaching
q27	−0.142	−0.183	0.035	**−0.499**	0.234	−0.048	0.361	Teaching discourages originality
q64	0.094	−0.063	−0.011	**0.480**	−0.030	0.044	0.246	I get along well with my students
q03	0.009	0.033	−0.031	**0.474**	−0.045	0.197	0.268	Teaching provides an opportunity to use a variety of skills
q58	0.023	0.347	−0.047	**0.407**	0.132	−0.190	0.343	I try to be aware of the policies of my school
q46	0.219	0.003	0.062	0.373	−0.165	0.268	0.290	The work of a teacher is very pleasant
q34	−0.140	0.082	−0.048	0.329	0.037	−0.059	0.141	I am responsible for planning my daily lessons

Item	F1	F2	F3	F4	F5	F6	h^2	Statements
q55	0.324	0.186	−0.153	0.121	**−0.638**	0.305	0.678	Working conditions in my school are good
q35	−0.206	−0.086	−0.067	−0.166	**0.624**	−0.147	0.493	Physical surroundings in my school are unpleasant
q18	**0.434**	0.153	0.059	0.069	**−0.616**	0.173	0.629	Working conditions in my school are comfortable
q28	**0.419**	0.146	0.124	0.103	**−0.547**	0.054	0.525	The administration in my school communicates its policies well
q16	**−0.408**	−0.012	−0.012	0.029	**0.496**	−0.043	0.415	The administration in my school does not clearly define its policies
q09	−0.328	−0.129	0.074	−0.006	**0.477**	−0.228	0.409	Working conditions in my school can be improved
q26	0.077	0.064	0.210	0.101	**−0.438**	−0.081	0.263	Working conditions in my school could be worse
q29	0.154	−0.135	0.252	−0.236	**0.418**	−0.118	0.350	I never feel secure in my teaching job
q07	0.005	0.031	−0.024	−0.029	0.382	−0.049	0.150	The work of a teacher consists of routine activities
q33	0.353	0.210	−0.068	0.066	−0.028	**0.669**	0.627	Teaching provides an opportunity for promotion
q50	0.349	0.203	−0.149	0.069	−0.112	**0.669**	0.649	Teaching provides a good opportunity for advancement
q08	−0.099	−0.068	0.061	−0.271	0.248	**−0.610**	0.524	I am not getting ahead in my present teaching position
q21	−0.257	−0.187	0.252	−0.049	0.054	**−0.575**	0.500	Teaching provides limited opportunities for advancement
q01	0.102	0.060	−0.020	0.190	−0.088	**0.449**	0.259	Teaching provides me with an opportunity to advance professionally
q51	0.019	0.382	−0.016	−0.142	−0.146	**0.401**	0.350	My interests are similar to those of my colleagues
q52	−0.150	−0.233	0.051	−0.279	0.157	0.303	0.274	I am not responsible for my actions

Note. Six-factor solution using varimax orthogonal rotation (Kaiser).

An interpretation of factor loadings for each factor (Table 4) is explained below. Based on the analysis of each factor and the interpretation, a name is used to reflect the overall point of view of each factor. Each factor represents holistic viewpoints of the participants, heretofore denoted in the following format; "P," followed by the participant's corresponding number, 1-129.

Part 1: Factor Interpretations

The following section reports the interpretation of each of the six factors. Factor scores with a factor loading $\geq \pm .40$ are used to explain the viewpoints of each factor. As an interpretation is subjective to the research, the qualitative responses are used to enhance and support the interpretations of each factor. Positive factor scores are interpreted in a viewpoint of agreement with the statements, whereas negative factor scores are interpreted in a viewpoint of disagreement. During the interpretation process, the initial themes were not considered to eliminate any preliminary bias for each factor.

Supportive and Appreciative Supervisor (F1)

Factor one (F1) explains 18.93% of the variance and has an eigenvalue of 9.18, accounting for about 20% of the viewpoints of all participants. Descriptively, 17 scale items load exclusively on this factor at or above the cutoff criterion. This factor has a mean factor loading of $M = .00$ ($SD = .98$), minimum factor loading of -2.30, maximum factor loading of 2.60, and median factor loading of .05.

Based on the respective factor loadings satisfying the cutoff criterion on this factor, F1 reveals a latent construct reflecting the shared viewpoints of the participants pertaining to supervisors or administrators who provide support and appreciate the work of teachers; therefore, factor 1 is labeled "Supportive and Appreciative Supervisors" (Table 5).

Table 5

Factor 1: Supportive and Appreciative Supervisors

Item	F1	h^2	Statement
q62	0.805	0.692	My immediate supervisor praises good teaching
q59	0.786	0.974	When I teach a good lesson, my immediate supervisor notices
q10	0.759	0.682	I receive recognition from my immediate supervisor
q60	0.741	0.566	My immediate supervisor explains what is expected of me
q31	0.724	0.542	My immediate supervisor treats everyone equitably
q17	0.723	0.545	My immediate supervisor gives me assistance when I need help
q24	−0.671	0.553	My immediate supervisor does not back me up
q49	−0.618	0.551	I receive too little recognition
q43	−0.608	0.556	My immediate supervisor is not willing to listen to suggestions
q53	0.597	0.424	My immediate supervisor makes available the material I need to do my best
q56	−0.596	0.506	My immediate supervisor makes me feel uncomfortable
q12	0.590	0.436	My immediate supervisor offers suggestions to improve my teaching
q47	−0.562	0.485	I receive too many meaningless instructions from my immediate supervisor
q06	−0.539	0.484	No one tells me that I am a good teacher
q05	−0.537	0.427	My immediate supervisor turns one teacher against another
q14	0.511	0.629	I receive full recognition for my successful teaching
q11	−0.404	0.364	I do not have the freedom to make my own decisions

Within the items comprising factor 1 (F1), item q62 (My immediate supervisor praises good teaching) loaded strongest (.81), with a communality (h^2) of 69.2%, denoting that the extracted component factor represents the item. The second strongest item (q59) (When I teach a good lesson, my immediate supervisor notices) loaded at .79. These two statements indicate that participants who share views with F1 believe that a supervisor or administrator recognizes teachers and praises teachers when teaching a "good" lesson. The third strongest item was q10 (.76) (I receive recognition from my immediate supervisor), followed by q60 (.74), (My immediate supervisor explains what is expected of me.) The weakest item q24 (My immediate supervisor does not back me up) had a factor loading of −.67 and was interpreted as a reciprocal to mean that teachers who share views with F1 believe that a supervisor does "back them up."

Participants who share views with this factor would be inclined to understand what is expected (q60) and can ask for help from a supervisor when clarification is needed (q17, q47).

Teachers with the viewpoints of F1 believe that a supervisor will provide resources (q24 and q53) and feedback to improve themselves inside (q12) and outside of the classroom to be an independent teacher (q11); through this process, the administrator is open to constructive feedback (q43).

The shared viewpoints of F1 would also agree that supervisors create an equitable environment of collegiality (q31 and q05), and when support is needed, teachers can simply ask without concern because there is a sense of trust among the teachers and supervisors (q56). Teachers who share these views would also feel recognized for their work (q14, q49, q10, q59, and q 62) and feel comfortable going to their supervisor for teaching advice (q12, q56, and q43).

The qualitative data provided by participants supplements the F1 viewpoints, as statement 49 (I receive too little recognition) with a loading of −.62 is augmented by a participant (P78) who shared, "My supervisor is key to my happiness . . . There are struggles everywhere, but he is positive, helpful, and makes me feel secure."

The importance of F1 is further documented via qualitative responses which cite the impact of such deficiency, as P7 and P26 cited a "lack of recognition," P79 stated, "zero recognition" and P87 put it more personally stating, "I wish there was more immediate feedback throughout the year from my supervisor."

Collegiality and Workplace Relationships (F2)

Factor two (F2) explains 10.93% of the variance and has an eigenvalue of 5.31, accounting for about 10% of the viewpoints of all participants. Descriptively, eight scale items load exclusively on this factor at or above the cutoff criterion. This factor has a mean factor loading of $M = .00$ ($SD = .98$), a minimum factor loading of −3.17, a maximum factor loading of 2.10, and a median factor loading of .08.

Based on the respective factor loadings satisfying the cutoff criterion on this factor, factor 2 reveals a latent construct reflecting the perception of teacher job satisfaction based on "Collegiality and Workplace Relationships" (Table 6).

Table 6

Factor 2: Collegiality and Workplace Relationships

Item	Factor 2	h^2	Statement
q48	−0.799	0.734	I dislike the people with whom I work
q15	0.788	0.63	I get along well with my colleagues
q20	0.785	0.639	I like the people with whom I work
q66	0.702	0.561	My colleagues seem reasonable to me
q37	−0.679	0.529	My colleagues are highly critical of one another
q32	0.639	0.496	My colleagues stimulate me to do better work
q41	−0.637	0.518	I do not get cooperation from the people I work with
q54	0.567	0.384	I have made lasting friendships among my colleagues

Within the items comprising factor 2 (F2), item q48 loaded strongest (−0.80), negatively coded, and therefore, has a reciprocal meaning and should be interpreted as, "I like the people with whom I work." The second strongest item was q15 (0.79), for the statement, "I get along well with my colleagues." These two statements indicate that participants who shared views with F2 valued a positive relationship with their coworkers. Third strongest was q20 (0.79), "I like the people with whom I work," and the fourth was q66, "My colleagues seem reasonable to me," at 0.70.

The shared viewpoints of F2 would value a positive coworker relationship (to "like") (q48, q15, q20) and value a cooperative, stimulating, and non-judgmental working relationship (q41, q66, q32, and q37), one that may even transfer from working relationship to lasting personal friendship (q54).

The qualitative data provided by participants supported F2, and P28 generally stated, "I have a great relationship with my peers," while P32 proclaimed to have "great coworkers." P8 elaborated combining F1 and F2, asserting, "I am satisfied with my teaching job because my colleagues and immediate supervisor are supportive," perhaps introducing a dual function, where the teacher also perceives their administrator as a colleague. Participants described their desire to connect with colleagues, positively denoting a broad age range of colleagues (P28), their need for collegial respect (P54, P108), the mentoring and supportive nature of collegial relationships (P8, P28, P98, P108), and an interactive element noted by P48 who stated, "The teachers in my department are great to work with." Similarly, participants further substantiated the importance of F2 by citing deficiencies in collegiality, as P54 stated, "My colleagues are sometimes unpleasant and passive-aggressively mean. I am the scapegoat, and it is tiring." P108 stated:

> I feel that I am not satisfied with my job . . . due the tribalism that comes about.
> You have some senior teachers that look down at colleagues who are newer and have no
> respect for them as a professional.

Clearly, the shared viewpoints of F2 would value a positive coworker relationship, a positive work environment.

Income and Job Security (F3)

Factor three (F3) explains 10.50% of the variance, with an eigenvalue of 5.10 accounting for about 10% of the viewpoints of all participants. Descriptively, nine scale items loaded exclusively on this factor at or above the cutoff criterion. This factor has a mean factor loading of $M = -.00$ ($SD = .98$), minimum factor loading of -2.03, maximum factor loading of 2.54, and median factor loading of -0.07.

Based on the respective factor loadings satisfying the cutoff criterion on this factor,

Factor 3 reveals a latent construct reflecting the perception of teacher job satisfaction based on

"Income and Job Security" (Table 7).

Table 7

Factor 3: Income and Job Security

Item	Factor 3	h^2	Statement
q44	0.826	0.695	Teacher income is barely enough to live on
q04	0.803	0.674	Insufficient income keeps me from living the way I want to live
q57	0.792	0.673	Teacher income is less than I deserve
q36	−0.791	0.664	I am well paid in proportion to my ability
q61	−0.789	0.644	Teaching provides me with financial security
q02	−0.787	0.642	Teacher income is adequate for normal expenses
q13	−0.563	0.426	Teach provides a secure future
q23	0.441	0.387	I am afraid of losing my teaching job
q65	−0.367	0.272	Pay compares with similar jobs in other school districts

Within the items comprising factor 3 (F3), item q44 ("Teacher income is barely enough to live

on") loaded strongest (0.83). The second strongest item (q04) ("Insufficient income keeps me

from living the way I want to live") loaded at .80. Third strongest (0.79) was q57, "Teacher

income is less than I deserve," and the fourth was q36 (−0.79), inversely interpreted, "I am well

paid in proportion to my ability." The weakest item was q65 (Pay compares with similar jobs in

other school districts), which loaded at −0.37. These variables indicate that income was of high

importance to the participants who shared views with F3, and although the participants may have

felt undervalued, they recognized that other districts could be paying more for the same work.

The shared viewpoints of F3 would value salary pertaining to supplying basic needs (q44,

q02) and providing a certain lifestyle (q04). Teachers who shared the viewpoints of F3 also

identify merit-based (q57) or ability-based pay (q36), regional salary comparisons (q65), and

would indicate job security (q13, q23, q61) as of import.

The qualitative data provided by participants support this, as P129 identified the importance of salary and benefits, stating, "I make good money and have decent benefits with summers off." Participant 69 touted work-related "benefits," stating, "As I get older, I am very appreciative of job security . . . and "a future pension," and P73 appreciated "family friendliness," stating, "It's a good job with pay and summers off . . . a good job when you have a family." Participants supported F3 in the inverse as well, citing deficiencies such as the pay scale model (P38), which requires longevity to achieve a satisfying salary, and that teachers are not remunerated comparably to those with similar education in other professions (P104).

Autonomy, Creativity at Work, and Student Relationship (F4)

Factor four (F4) explains 9.11% of the variance and has an eigenvalue of 4.42, accounting for about 10% of the viewpoints of all participants. Descriptively, 11 scale items load exclusively on this factor at or above the cutoff criterion. This factor has a mean factor loading of $M = -0.00$ ($SD = 0.96$), minimum factor loading of -2.45, maximum factor loading of 2.34, and median factor loading of 0.04.

Based on the respective factor loadings satisfying the cutoff criterion on this factor, factor 4 reveals a latent construct reflecting the perception of teacher job satisfaction based on "Autonomy, Creativity at Work, and Student Relationship" (Table 8).

Within the items comprising factor 4 (F4), item q25, "Teaching is very interesting work" loaded strongest at 0.66. The second strongest item (q22) "My students respect me as a teacher") loaded at 0.59. Third was q19 (0.58), "Teaching provides me the opportunity to help my students learn," and the fourth was q42 (0.57), "Teaching encourages me to be creative." The weakest item (q58), "I try to be aware of the policies of my school," loaded at 0.41.

Table 8

Factor 4: Autonomy, Creativity at Work, and Student Relationship

Item	Factor 4	h^2	Statement
q25	0.659	0.491	Teaching is very interesting work
q22	0.589	0.359	My students respect me as a teacher
q19	0.579	0.365	Teaching provides me the opportunity to help my students learn
q42	0.569	0.4	Teaching encourages me to be creative
q30	−0.542	0.48	Teaching does not provide me the chance to develop new methods
q38	0.51	0.342	I do have responsibility for my teaching
q45	−0.501	0.407	I am indifferent toward teaching
q27	−0.499	0.361	Teaching discourages originality
q64	0.48	0.246	I get along well with my students
q03	0.474	0.268	Teaching provides an opportunity to use a variety of skills
q58	0.407	0.343	I try to be aware of the policies of my school

Participants who shared views with this model would be inclined to have a genuine

passion for the art of teaching (q25, q45), inclusive of autonomy (q38) and creativity (q42, q30,

q27). Teachers who shared this view would also be desirous of honing requisite teaching skills

(q42, q30) and valued a positive, respectful relationship with their students (q22, q64),

culminating in impactful learning (q19).

The qualitative data provided by participants were mostly in the affirmative (i.e., what I

"like" about my teaching job) and supported F4 with assertions such as P6, who stated, "I love

my students. They are the best part of teaching. I find my daily interaction with them to be the

most fulfilling part of teaching." P48 spoke to the autonomy of the job, stating, "I have freedom

to teach lessons the way I want, so long as they meet the standards." P86 indicated the need for

meaning in work, stating teaching was the only career that was "meaningful." P105 confirmed

F4 but asserted a shift to "test prep" had diminished the purpose of the teacher, and P6 cited the

added administrative tasks, citing the "caseload, workload, and paperwork is difficult to

maintain."

Working Conditions and School Culture (F5)

Factor five (F5) explains 8.38% of the variance and has an eigenvalue of 4.07, accounting

for about 8% of the viewpoints of all participants. Descriptively, eight scale items loaded

exclusively on this factor at or above the cutoff criterion, and two items (q18, q28) cross-loaded

positively (loading = 0.43, 0.439 respectively), while one item (q16) cross loaded negatively at

0.42. This factor has a mean factor loading of $M = -0.00$ ($SD = 0.06$), a minimum factor loading

of −2.53, a maximum factor loading of 3.13, and a median factor loading of −0.10.

Based on the respective factor loadings satisfying the cutoff criterion on this factor, factor

5 reveals a latent construct reflecting the perception of teacher job satisfaction based on

"Working Conditions and School Culture" (Table 9).

Within the items comprising factor 5 (F5), item q55, "Working conditions in my school

are good" loaded strongest at 0.32. The second strongest item (q35) was interpreted reciprocally

as "Physical surroundings in my school are pleasant," which cross-loaded at −0.21 on factor 1

and 0.62 for factor 5. Next to last (−0.44) was q26, which was interpreted reciprocally as

"Working conditions in my school could not be worse." The weakest item (q29), "I never feel

secure in my teaching job," loaded at 0.41, cross-loading at 0.15 on factor 1.

Table 9

Factor 5: Working Conditions and School Culture

Item	Factor 5	h^2	Statement
q55	−0.638	0.678	Working conditions in my school are good
q35	0.624	0.493	Physical surroundings in my school are unpleasant
q18	−0.616	0.629	Working conditions in my school are comfortable
q28	−0.547	0.525	The administration in my school communicates its policies well
q16	0.496	0.415	The administration in my school does not clearly define its policies
q09	0.477	0.409	Working conditions in my school can be improved
q26	−0.438	0.263	Working conditions in my school could be worse
q29	0.418	0.35	I never feel secure in my teaching job

Participants who shared views with F5 would be aware of the general climate of work (q55, q18, q26) and the workplace infrastructure (q35). Shared view-holders would believe working conditions could be improved (q09), desired a sense of security (q29), and believed that effective, clear communication (q28, q16) was necessary for efficacious dissemination of policies.

Qualitative responses were voluminous regarding F5, with the highest feedback from participants, where P94 asserted, "My school's atmosphere is positive and inclusive." Another participant (P12) added, "I teach in the community in which I live and where my own children went to school" and perceived "connection to community" as a positive. Participants who shared the viewpoint of F5 agreed that they would like to see improvement regarding safety and infrastructure (P5) and valued a positive culture within the workplace (P2, P39, P48, P73).

The area of most commonly reported F(5) themes had to do with administrators or supervisors, as shared viewpoints valued positive relationships with supervisors, specifically effective and positive leadership styles and behaviors such as administrators/supervisors who were compassionate (P43), informed and supportive (P35, P43), respectful (P79), accessible P35, equitable (P70), a mediator (P35, P70), appreciative (P79, P80, P43), effective communicators (P 17, P19, P21, P26, P39, P46, P49, and others), including communication of district policies (P4, P16, P74, 77, 78, and others).

Overwhelmingly, participants stated, in sum or substance, that they craved a low-stress, positive work environment, wherein they would be both adequately supported and treated respectfully, especially by administrators (P86). Teachers reaffirmed their need for positive relationships in the workplace and identified administrators as those agents who could provide, directly or indirectly, an environment wherein teachers felt genuine "concern for their safety and

happiness" (P79). These statements indicated that teachers valuing the views of F(5) factor seem

to yearn for a positive work environment and positive relationships with their supervisors and

peers.

Advancement and Professional Growth (F6)

Factor six (F6) explains 6.77% of the variance and has an eigenvalue of 3.28, accounting

for about 7% of the viewpoints of all participants. Descriptively, six scale items loaded

exclusively on this factor at or above the cutoff criterion. This factor had a mean factor loading

of $M = 0.00$ ($SD = 0.95$), a minimum factor loading of -3.68, a maximum factor loading of 2.20,

and a median factor loading of 0.06.

Based on the respective factor loadings satisfying the cutoff criterion on this factor, factor

4 revealed a latent construct reflecting the perception of teacher job satisfaction based on

"Advancement and Professional Growth" (Table 10).

Within the items comprising factor 6 (F6), item q33, "Teaching provides an opportunity

for promotion," loaded strongest at 0.67. The second strongest item (q50), "Teaching provides a

good opportunity for advancement," loaded at 0.67. The third strongest item (-0.61) was q08,

inversely interpreted as "I am getting ahead in my present teaching position," and the fourth

(-0.58) was q21, also inversely interpreted as "Teaching provides opportunities for

advancement." The weakest item (q51), "My interests are similar to those of my colleagues"

loaded at .40.

Participants who shared views with F6 tended to be self-aware and evaluate their status

regarding upward mobility (q08), were desirous of advancement in the teaching profession (q33,

q50), identified specific means by which to advance (q01), and may have compared themselves

to their peers (q51).

Table 10

Factor 6: Advancement and Professional Growth

Item	Factor 6	h^2	Statement
q33	0.669	0.627	Teaching provides an opportunity for promotion
q50	0.669	0.649	Teaching provides a good opportunity for advancement
q08	−0.61	0.524	I am not getting ahead in my present teaching position
q21	−0.575	0.5	Teaching provides limited opportunities for advancement
q01	0.449	0.259	Teaching provides me with an opportunity to advance professionally
q51	0.401	0.35	My interests are similar to those of my colleagues

Participants who shared views with F6 tended to be self-aware and evaluate their status regarding upward mobility (q08), were desirous of advancement in the teaching profession (q33, q50), identified specific means by which to advance (q01), and may have compared themselves to their peers (q51).

Participants provided the following statements supplementing F6. However, only two responses were in the positive. P12 stated, "We had incentives to raise our salaries through achieving National Board Certification and achieving 60 credits above masters." Another participant (P20) appreciated professional development, stating, "My district and building administration support and provide a lot of professional development opportunities and as a new teacher [four years] it helps me build confidence and new skills." The balance of qualitative responses were those describing teachers who were not satisfied with professional development opportunities, but in so doing, they demonstrated shared values with F6, specifically valuing opportunities for advancement, as P106 described a bifurcation of advancement for teachers, explaining, "You are either a teacher or an administrator, there should be something in between." P124 elaborated upon this theme, stating, "I often feel "stuck . . . there is little room for promotion." P84 proclaimed that teachers valued targeted, relevant professional development.

The implication is that better communication and needs assessments could be utilized to achieve this goal.

Part 2: Factor and Covariate Comparisons (*T*-tests)

This section examines the six factors compared to the covariates and investigates whether two sets of data, compared by their observed means, were most likely derived from the same distribution or population using a by-comparison statistical approach (*t*-test).

After creating a table of descriptive statistics, I created histograms with a normal bell-curve distributions to determine if each factor's loadings were within the *SD* range for each factor. Upon each individual examination, I noticed that F2 appeared unique and then created a side-by-side figure with the 6 histograms of each factor to make a direct comparison (Figure 10), which indicated that F2 had a grouping with more than −2.0 standard deviations.

Figure 10

Histogram Comparison
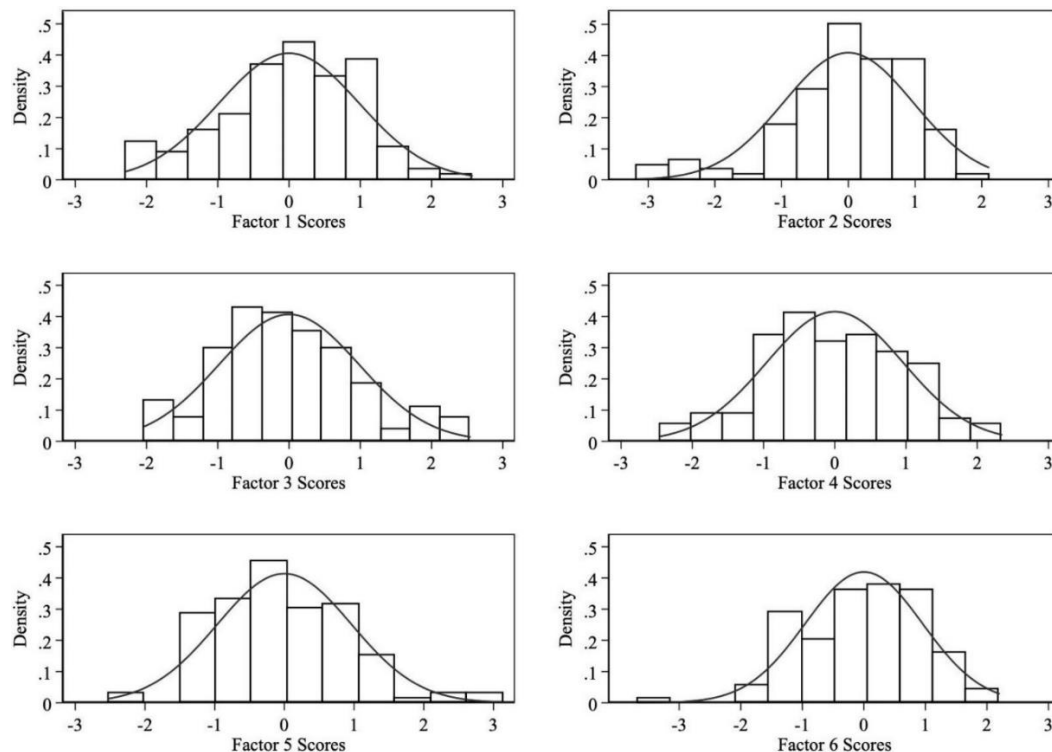
Prompted by the exceptionality of F2, a table of descriptive statistics was created to examine this more closely (Table 11). The *t-test* was the statistical process of choice, as a researcher can inferentially determine if a difference exists [in any direction] between the means of two groups, in this case, male and female, at a statistically significant level. Statistical significance is measured in terms of probability (*p*), where $p < .05$, and where the datasets generally follow a normal distribution curve. More specifically, a paired-sample *t*-test is employed here to comprehend if the means of two continuous variables, representing the same subjects, are different from each other at a statistically significant level (Red Owl, personal communication, April 2019).

Components of the two-sided *t*-test include the difference (diff), which is defined as the difference between the mean values of each set of data and the SD and sample size (*n*). A review of the two-sample *t*-test revealed the mean of differences for F2 as (−0.46) with a *t*-score of 0.017 and occurring at a highly statistically significant probability rate where $p = .0085$.

Table 11

T-test of Factor 2 and Sex

Group	Obs	*M*	Std. Err.	*SD*	[95% Conf.	Interval]
Male	34	−0.34	0.22	1.28	−0.79	0.10
Female	95	0.12	0.08	0.82	−0.04	0.29
combined	129	−3.70E-10	0.09	0.98	−0.17	0.17
diff		−0.46	0.19		−0.84	−0.08

Notes. diff = mean (male) – mean (female), $t = -2.42$, Ho: diff = 0, degrees of freedom = 127, Ha: diff < 0, Ha: diff!= 0, Ha: diff > 0, Pr(T < t) = 0.0085, Pr(|T| > |t|) = 0.0170, Pr(T > t) = 0.99.

Figure 11 indicates that the females who shared views with F2 had concerns over relationships with colleagues (20% at −3.0 *SD*). Whereas the scores reported on the left side (males) had less concern about relationships (< 5% at −3.0 *SD*). This discovery indicates that females have more concern over relationships with colleagues than males when working in

schools. One female participant (P28) confirmed this notion, acknowledging satisfaction came

via relationships with colleagues, supervisors, and students, stating:

> I have a great relationship with my peers. There is a lot of variety of age, and so there are
>
> people I can connect with on every level. I have a great group of peers here, and I have
>
> people to look up to who have been in the profession for a long time. I adore the people I
>
> work with. I also find administration in credibly supportive. Many people will complain
>
> about conditions here, but they have no idea how great it really is compared to others. I
>
> have always felt supportive or heard by my immediate supervisors. Administration has
>
> had my back and come to my defense when needed. When I have a concern, I feel
>
> comfortable talking to anyone of the administrators in my building. I also never expected
>
> to love the student body the way that I do. I thought I would have a hard time connecting
>
> with this population when I was initially hired, but in the years since then, I have found
>
> that I connect well with them and they with me.

Figure 11

Histogram of F2: by Gender
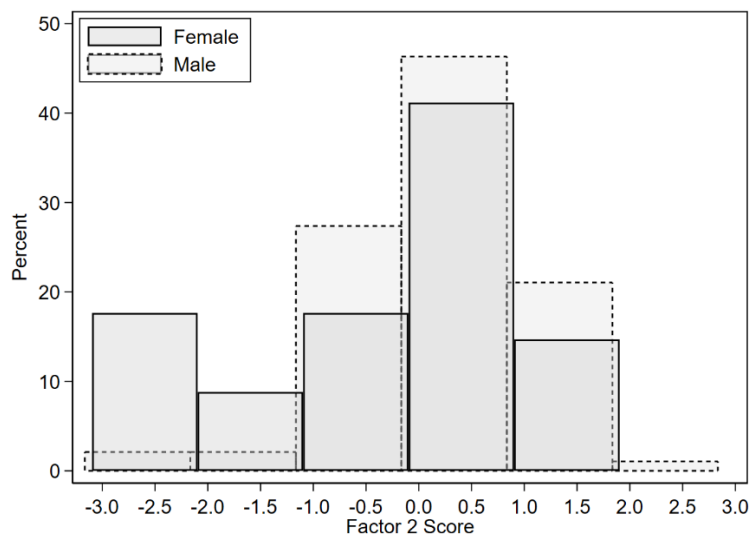
Part 3: Responses to the Research Questions

This section synthesizes the above results and relates the findings directly to the research questions.

Research Question 1

RQ1: What are the latent variables of teacher job satisfaction?

The analysis reported in this chapter indicates six factors shared views regarding teacher job satisfaction of the teachers ($n = 129$) who participated in this study:

- Supportive and Appreciative Supervisor (F1)

- Collegiality and Workplace Relationships (F2)

- Income and Job Security (F3)

- Autonomy, Creativity at Work, and Student Relationship (F4)

- Working Conditions and School Climate (F5)

- Advancement and Professional Growth (F6)

The six "discovered" factors are very closely aligned with those identified by Lester (1982), indicating consistency over time. These factors depict motivators or job satisfiers; higher-order needs that can influence an employee to work harder seeking such intrinsic motivators as achievement (F6), the work itself (F4), responsibility, and opportunity for advancement (F4), also leading to recognition and growth (F6) (Dinham & Scott, 1998; Herzberg, 1964).

According to Herzberg (1964), hygiene factors (dissatisfiers) did not describe "man's [humankind's] relationship with what he does," his work, but rather dissatisfiers described man's [humankind's] "relationship to the context or environment in which he does his job" (p. 4). In short, Herzberg asserted job satisfaction is less impacted by what one's vocation and more about

where and how one does it, the context and environment. With that said, the work environment is comprised of hygiene factors, lower-order needs comprised of extrinsically motivated factors such as "company policy and administrative practices (F5), supervision (F1), interpersonal relationships (F2), working conditions (F5), and salary (F3)" (Herzberg et al., 2017, pp. 113-114) and were found to impact job satisfaction only slightly (Dinham & Scott, 1998; Herzberg, 1964).

Research Question 2

RQ 2: What are the strongest indicators of teacher job satisfaction?

Relationships emerged as the strongest indicator of teacher job satisfaction, as primarily reported by F1, "Supportive and Appreciative Supervisor," and F2, "Collegiality and Workplace Relationships," but also inclusive of relational behaviors contained within F5 "Working Conditions and School Culture."

F1 describes the dynamic between teacher and supervisor, wherein at least one participant (P78) elevated such relationship to a zenith, asserting, "My supervisor is key to my happiness . . ." A female teacher described a supervisor who "has their back," "comes to their defense," and is easy to speak with (P28). Teachers described a desire for a supervisor or administrator who recognized teachers and praised teachers when teaching a "good" lesson, recognized their accomplishments, gave feedback, and would "back them up." The seeking of supervisory feedback could be considered motivation to seek satisfaction via F4, "Autonomy, Creativity at Work, and Student Relationship."

Teachers also sought job satisfaction through collegial relationships and tended to value a positive coworker relationship (to "like") (q48, q15, q20) and a cooperative, stimulating, and non-judgmental working relationship (q41, q66, q32, and q37), one that may even transfer from working relationship to lasting personal friendship (q54).

Some would argue F5 "Working Conditions and School Culture" contained many relational [supervisory] behaviors such as effective communication, fair and equitable treatment, conflict resolution, and more. The area of most commonly reported, qualitative F5 themes, had to do with relationality of administrators (supervisors), as shared viewpoints valued positive relationships with supervisors, specifically efficacious leadership styles and behaviors such as administrators/supervisors who are compassionate (P43), informed and supportive (P5 and P43), respectful (P79), accessible P35, equitable (P70), a mediator (P35 and P70), appreciative (P79, P80, and P43), effective communicators (P17, 19, 21, 26, 39, 46, 49 and more), including communication of district policies (Participants 4, 16, 74, 77, 78, more).

Research Question3

RQ 3: What factors exist to reveal teachers' perspectives related to teacher job satisfaction?

A *t*-test discovered that gender was an additional factor to be considered within teacher job satisfaction. This discovery indicates that gender may reveal teachers' perspectives regarding relationships with colleagues (F2). The results of the *t*-test yielded that females have more concern over relationships with colleagues than males when working in schools. In addition to Participant 29, cited previously, other female participants described teacher job satisfaction through the lens of collegiality, such as Participant 52, "My colleagues are great," "supportive" (Participant 76 and Participant 99), and Participant 95 blended appreciation of colleagues and supervisors, stating, "I am appreciated and valued as a teacher by my colleagues and immediate supervisor."

Chapter Summary

Using EFA, the study discovered six complex shared viewpoints among teachers who provided their perspectives on teacher job satisfaction.

The results included: (a) pure shared viewpoints, (b) an interpretation of each of the six factors, and (c) *t*-tests for a by-comparison of the covariates.

Although each factor is complex and represents various contexts, relationships with colleagues was discovered as a theme among several factors (F1, F2, F4, and F5). The context of relationships is nuanced within each factor where F1 reveals relationships with a supervisor most likely indicated teacher job satisfaction, F5 also indicated that the culture, also referenced as working conditions or atmosphere, also led to teacher job satisfaction and was typically driven by the supervisors. F2 indicated the views that teachers had concerns about relationships with colleagues, whereas F4 revealed that teachers also had concerns over their relationships with students. This discovery indicates that teacher job satisfaction was most likely impacted by the relationships surrounding the teaching career, and females tended to have more concern over relationships than males.

In the final chapter, I present my conclusions, and their implications for educational practice, professional development, teacher preparation programs, and future research on teacher job satisfaction. In the context of this study, I also provide my personal views on improving a teacher's job satisfaction so we can ultimately improve our schools.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

In the final chapter, I present the conclusions, and implications for educational practice, professional development, teacher preparation programs, and future research on teacher job satisfaction. In the context of this study, I also provide my personal views on improving a teacher's job satisfaction so we can ultimately improve our schools.

Conclusions

In the next two sections, I provide conclusions pertaining to the factors discovered using EFA in Chapter IV and the theories explored in Chapter II.

Conclusions of the Six Factors

Understanding the satisfaction of a professional's job is challenging, and Chapter IV explains the interpretations of these subjective perspectives. Through an interdisciplinary lens, this research discovered the factors associated with teacher job satisfaction and the strongest indicator of relationships.

Specifically, when reviewing the results holistically, teachers placed relationships at the forefront of their personal perspectives in relation to job satisfaction, and women tend to place more concern with relationships in the workplace. Teachers solidified relationships as the strongest indicator of teacher job satisfaction (see Chapter IV, RQ2) when examining four of the six factors (F1, F2, F4, and F5) collectively. These factors depict relationships in general and the quality of the relationship as non-negotiable requisites of job satisfaction for educators (Pepe et al., 2017).

The importance of relationships within the school culture (F5) is critical and directly impacts a teacher's job satisfaction. F5 indicates that teachers prefer a positive building and

district culture. More importantly, F4, F2, and F1 explicitly indicate that direct relationships with

supervisors, colleagues, and students are important. In contrast, F5 and F4 indicate the indirect

impact upon a teacher's job satisfaction.

Direct Relationships

Teachers seek relationality through various vocational offerings, wherein they might seek

positive relationships with supervisors (F1, F5), colleagues (F2), and/or students (F4). For factor

6, Advancement and Professional Growth, the qualitative data indicate that teachers use

mentor/mentee relationships, professional learning communities, and relationships with

supervisors to advance in the field. These direct relationships greatly impact a teacher's job

satisfaction because the relationships encompass so many different aspects of the job. From

teaching students to being evaluated by a supervisor, having lunch with a colleague, sharing a

professional period with a colleague to review a lesson, or attending a conference with a

supervisor, each direct interaction impacts job satisfaction.

Indirect Relationships

In conclusion, the research finds that working conditions, including policy,

communication, and systemic factors, are relational, literally possessing a human face. To

illustrate, this study concluded that Working Conditions and School Culture (F5) emerged as an

important, relational concern for teachers. I now realize that the systemic aspects of a teacher's

job are personified, giving humanistic traits to policies, modes of communication, and general

practices that impact the school culture and impact a teacher's job satisfaction. A teacher's

satisfaction or dissatisfaction with leadership, policies, modes of communication, and practices

can lead to a positive career experience or leaving the profession entirely. This conclusion

indicates that schools should pay close attention to indirect relationships to continually improve

the school culture. Therefore, I conclude that the moment a teacher walks into the school

building, the culture or "feeling" of the building impacts their satisfaction with their work, and

García Torres (2018) supported that the atmosphere of a building is driven by leadership.

Given data on teacher shortages, policymakers should be placing the impact that direct

and indirect relationships have on teacher recruitment and retention as a top priority (further

details below), inclusive of teacher job satisfaction. When 85% of Americans identified that the

attraction and the retention of good teachers were their highest priorities for the federal

government in this election year (PDK, 2020, k5-k6), then schools should use this research to

maintain the educational system.

Conclusions Integrating Theoretical Approaches

The six factors discovered in this research (Chapter IV) depict Herzberg's job satisfiers,

or dissatisfiers (Herzberg, 1964), as presented in Chapter II, concluding that Herzberg's hygiene

theory extends to the educational workplace.

This study found that job satisfiers are those factors that can influence an employee to

seek teacher job satisfaction via intrinsic motivators, namely F4 Autonomy, Creativity at Work,

and Student Relationship and F6, Advancement and Professional Growth (Dinham & Scott,

1998; Herzberg, 1964). Participants (P) offered approximately the same number of responses

describing what they liked and disliked about their jobs in terms of F4 and F6. However,

participants who shared views with F4 responded with robust, powerful, and decidedly relational

themes, mostly referencing students, proclaiming: "I love my students. They are the best part of

teaching. I find my daily interaction with them to be the most fulfilling part of teaching" (P6) and

where P49 stated, "I feel like my students allow me to be a part of their lives and that is where I

can help them most."

This study affirmed the tenets of Herzberg's hygiene theory (Chapter IV) in the field of education. The hygiene factors (dissatisfiers) are those that do not describe "man's [humankind's] relationship with what he does;" his work, but rather dissatisfiers described man's [humankind's] "relationship to the context or environment in which he does his job" (Herzberg, 1964, p. 4). In conclusion, the following factors were identified through this research as hygiene factors or dissatisfiers: F1, F2, F3, and F5.

To illustrate, F1, Supportive and Appreciative Supervisor, was reported through participants' qualitative responses approximately five times more as "not satisfied" than "satisfied." Similarly, F2, Collegiality and Workplace Relationships, was reported by slightly more participants as "not satisfied" as "satisfied," and F3, Income and Job Security, reflected about twice as many participants reporting themes as "not satisfied," versus "satisfied." However, it is F5, Working Conditions and School Culture, that is striking. Specifically, F5 elicited more participant qualitative responses than any other, more than 70, but where 69 of such responses represented Herzberg's job dissatisfaction or denoted deficiencies, some of which may be due to the broadly inclusive nature of the category, which included both systemic issues and interpersonal relations. (Figure 12)

Figure 12

Bar Graph of Satisfied Compared to not Satisfied Responses by Factor
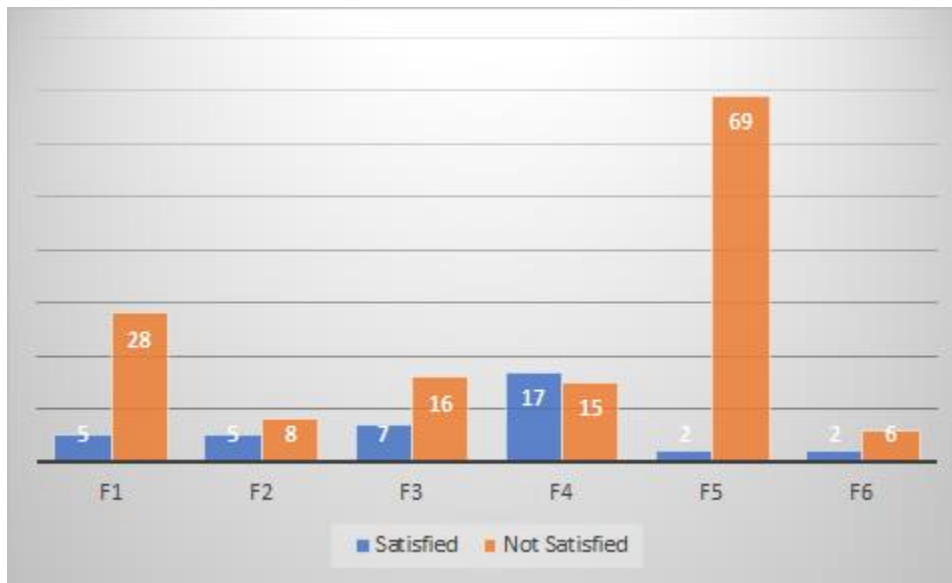
This study concurs with the theoretical assertions of Herzberg (Chapter II), as

participants responded likewise to two open-ended questions, describing aspects of their job

from which they derived satisfaction and those aspects that they did not. It is noteworthy that

voluminous qualitative responses were presented explaining what teachers disliked about their

jobs (Herzberg's hygiene factors), substantiating both the efficacy of the "discovered" factors of

teacher job satisfaction and giving homage to Herzberg's hygiene theory. Moreover, teachers

more frequently enumerated, and seemed to weigh more heavily, the relationally themed factors

(F1, F2, F4, and F5), even when presented as deficient, indicating such as critical to teacher job

satisfaction. Last, these findings are substantiated by the literature, asserting hygiene factors are

lower-order needs comprised of extrinsically motivated factors such as "company policy (F5)

and administrative practices (F5), supervision (F1), interpersonal relationships (F1, F2), working

conditions (F5), and salary" (F3) (Herzberg et al., 2017, pp. 113-114), which were found to only

slightly impact job satisfaction (F4, F6) (Dinham & Scott, 1998; Herzberg, 1964). Further review

indicates teachers are typically more satisfied with factors (job satisfiers) such as the work itself,

professional growth, and self-efficacy, compared with hygiene factors such as working

conditions, salary, relationships with colleagues, and leadership styles (Buonomo et al., 2020;

Butt et al., 2005).

Implications for Practice and Professional Development

The salient implications of this study are also timely, as the discovery of teacher job

satisfaction's underlying factors is vital to attracting well-qualified teachers to the profession and

retaining them. With a potential wave of teachers exhibiting low job satisfaction, (a) identifying

the contributing factors of teacher job satisfaction and (b) implementing effective remedies

becomes imperative. Professional development has been indicated to enhance the quality of

instruction and to encourage teacher retention by raising overall teacher satisfaction (Ingersoll et

al., 2014; Kraft et al., 2016; Toropova et al., 2021). In this section, I provide implications for

teacher retention, practices for teacher retention, practices for working conditions, and

professional development.

Teacher Retention

In this study, participants repeatedly assessed job satisfaction in terms of relationships;

relationships with their colleagues, their students, and especially with supervisors. This theme is

overwhelmingly substantiated by the literature, as leadership is identified as the strongest

predictor of teacher retention because leaders behave relationally, positively or negatively, which

impacts a school's atmosphere (García Torres, 2018). The impact is reported by study

participants describing relationships with supervisors (F1) and colleagues (F2) as not merely

measures of teacher job satisfaction, but also related to retention, and supported by the literature,

whereas "teachers who felt most supported by school administration and who had positive working relationships with other teachers were more likely to be retained" (Geiger & Pivovarova, 2018, p. 609; see also Johnson & Birkeland, 2003; Nagy & Wang, 2007; Worthy, 2005). Moreover, interpersonal relationships in the school are described as having an ameliorative effect (Pepe et al., 2017; Van Droogenbroeck et al., 2014), perhaps combating educator burnout, whereas healthy, satisfactory relationships with all educational stakeholders, including peers, parents, students, and especially supervisors can have a positive effect upon the sometimes-harmful impacts of teaching (Cano-García et al., 2005; Gavish & Friedman, 2010; Skaalvik & Skaalvik, 2011). In reviewing the literature and my interpretations of the factors, I conclude that teachers' relationships with supervisors (García Torres, 2018) and colleagues are the most vital factor in retaining teachers and improving job satisfaction.

Practice for Teacher Retention

As this study affirmed the relational component of teacher job satisfaction, it would seem prudent to include best practices, such as (a) hiring, (b) training (professional development), and (c) supporting teachers. Professional development is introduced here and is discussed in the next section.

Hiring well-qualified leaders and providing continued targeted professional development for existing leaders are key. Among the variables contributing to teacher retention, "leadership quality emerged as the most salient factor for teacher retention" (García Torres, 2018, pp. 129-130; see also Boyd et al., 2011; Ladd, 2011) while "leadership quality was even more significant for retention in disadvantaged schools" (García Torres, 2018, pp. 129-130).

The implications of this study demand a pragmatic response; one formulated in an action plan, where efforts to combat teacher attrition begin with listening to the concerns of teachers,

and doing so with great empathy, as teachers are more likely to stay in the field if they benefit from the support of their leadership (Learning Policy Institute, 2017). Teachers may prioritize support from leadership as more important to retention in the educational field than workload, and that can materialize in the provision of both "emotional and instructional support" (Learning Policy Institute, 2017, p. 2).

Schools can mitigate the teacher shortage by committing to and establishing policies and procedures that ensure positive school culture by providing supportive work environments, hiring and retaining empathetic, effective, and integrous leaders, and mentoring teachers through the first five years of their career. An appropriate, competitive wage is also positively associated with teacher retention (European Union, 2013; Geiger & Pivovarova, 2018, p. 606; Hanushek et al., 2004; Podgursky et al., 2004).

Practice for Working Conditions and Positive Relationships

In sum, this study concluded the need to ensure a school is a positive workplace or school culture, including a teacher's supervisory and collegial relationships, as clearly the most significant predictor of job satisfaction. This conclusion is substantiated by the research purporting "teacher autonomy, administrative support and leadership, and staff collegiality were the most reported, strongest predictors of satisfaction (García Torres, 2018, p. 130; Johnson et al., 2012; Ma & MacMillan, 1999; Shen et al., 2012; Skaalvik & Skaalvik, 2009; Stockard & Lehman, 2004; Tickle et al., 2011). Therefore, in practice, school districts should focus resources on continual improvement of school culture to maintain a positive work environment for teachers and all employees of the school district because satisfied employees positively impact our students' future.

Professional Development

Given that leadership is a requisite shaper of those within the educational walls, research and science-based professional development for administrators have not been widely prioritized, and agreement among educational leaders regarding efficacy is rare (Daniëls et al., 2019). Professional development for administrators may be underutilized and underfunded, as federal law allows states to apply 3% of their "Title II formula funds to strengthen principal quality, including by investing in principal recruitment, preparation, induction, and development" (Learning Policy Institute, 2017, p. 4).

However, targeted professional development is a current best practice with the NYSED, and therefore professional development curricula should be relevant, individualized, and timely, using scaffolding as in student instruction (Daniëls et al., 2019; Goldring et al., 2014; Huber, 2013; Simkins, 2012; Wright & da Costa, 2016).

Professional Development for Individuals Within a School

The ESSA (n.d.) requires continuing education for teachers, administrators, and staff. Sadly, only 40% of teachers reported professional development as efficacious (New Teacher Project, 2015), and much of school-based professional development is characterized as a "train-and-hope practice" Hirsch et al., 2018, p. 84; see also Wei et al., 2009). In general, professional growth ranges in activities from "formal training sessions to informal interactions at the workplace (Daniëls et al., 2019, p. 120; see also Goldring et al., 2014). Individual professional development is essential, and schools must foster a growth mindset (Dweck, 2008) because schools are learning organizations, as first postulated by Toffler (1984), asserting, "The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn" (Toffler, 1984, p. 414).

Professional Development for Leadership

Professional development for administrators requires honesty and congruence from

leaders, teachers and administrators to be reflective, honest, and congruent, as administrators

"who do not view themselves as traditional, omnipotent, 'top-down' administrators" have been

associated with low teacher attrition rates" (LPI, 2017, p. 1). The workplace cannot be

compartmentalized through depersonalization, and leaders must be cognizant of the nature of

work, that we were "created for meaningful work, and one of life's greatest pleasures is the

satisfaction of a job well done" (Maxwell, 2014, p. 1), echoing the relational them of this

research. Moreover, the National Association of Secondary School Principals (NASSP)

enumerates *building school culture* as the most prevalent topic among its administrative

members (NASSP, 2021), while the American Association of School Superintendents (AASS)

incorporates superintendents in SEL skills training (AASS, 2019).

Leadership's Impact on School Culture and Relationships

This study has well described the need for a healthy, positive school atmosphere and

culture, inclusive of healthy relationships. Although teachers and administrators have a part to

play in promoting a positive culture, most would attribute the onus to the school and district

leadership. These implications suggest that hiring, training, and fostering an infinite mindset

(Sinek, 2019) among leaders will support and continually foster a positive culture within our

schools. Even our purported solutions must be scrutinized as "today's problems come from

yesterday's solutions" (Senge, 2006, p. 57).

Leaders can learn from Google, where employees described effective leaders as having

"soft skills" such as mentoring, coaching, and effective communication (Shrivastava et al., 2018,

p. 1). Principals also describe the relational theme discussed herein, adding that collegial,

relational learning (networking), and sharing best practices were effective and reactivated

existing knowledge (Daniëls et al., 2019; Goldring et al., 2014; MacBeath, 2011).

Ironically, best practices of professional development include providing instruction

through a relational delivery system, experientially (Daniëls et al., 2019, p. 120; see also Gunter

& Ribbins, 2002; Reeves et al., 1998; Wright & da Costa, 2016), and utilizing such strategies as

individual peer coaching and mentoring (Zhang & Brundrett, 2010).

Professional Development for Improving Relationships and Culture

Positive leadership styles and relationships emerged from this research as critical

components of teacher job satisfaction; attributes confirmed as staff culture/climate indicators

(National School Climate Center, 2021). School improvement efforts target such goals by first

operationally defining the concepts and prompting a shift from climate ("short term behaviors")

to culture ("long-term expectations") (Gruenert & Whitaker, p. 16). Climate is sometimes

described behaviorally; that is what we do, whereas values are described as "why we do it" (p.

16), defining long-term expectations of "normalcy and morality" (Gruenert & Whitaker, 2015, p.

19). NYSED defines school climate as the "subjective experience of school (how students and

staff feel about the school)" contrasting it with school culture; "the actual state of the school

(why they feel the way they do [e.g., shared experiences, beliefs, and values]) (NYSED, 2019, p.

18).

School districts can improve relationships and leadership in schools by first listening to

the concerns of students, staff, and the community (National Center on Safe Supportive,

Learning Environments, p. 1) via formal needs assessments or through personal conversations

and narratives which can elicit very specific nuances. This process allows for relevant, targeted,

content-focused personal development for educators (Hirsch et al., 2018, p. 84; see also Darling-Hammond et al., 2017).

A district "buy in" begins with collective identification of and commitment to a mission, as well as allocation of resources, time for professional development, and human capital (U.S. Department of Education, Office of Elementary and Secondary Education, 2021). Moreover, teachers who can "maximize their perceived positive emotions and minimize negative ones" describe higher levels of job satisfaction and achieve a "hedonic balance" (Buonomo et al., 2020; Caprara & Steca, 2006). To that end, socioemotional learning is a key and timely personal development topic, but not simply for students, as teachers and administrators can "acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, [and] establish and maintain supportive relationships" (CASEL, 2021, p. 1), with the goal of educator wellness (Yale Center for Emotional Intelligence, 2021). Succinctly, teachers empowered with SEL skills such as self-regulation are better equipped to "manage relationships with students, colleagues, and principals," as well as stress management (Buonomo et al., 2020, p. 3).

Leadership and Teacher Retention

Professional development for leaders is key, as leadership is reported (F1) by teachers as "the strongest predictor of [teacher] retention (García Torres, 2018, p. 140; see also Boyd et al., 2011; Grissom, 2011; Ladd, 2011). Leadership quality was determined as "even more significant for retention in disadvantaged schools" (Grissom, 2011; Ladd, 2011, pp. 129-130), while further research describes teachers as valuing the quality of leadership over salary in determining to stay or leave a district (Learning Policy Institute, 2017, p. 1).

This study has shown that leadership skills, particularly relational skills, are related to teacher job satisfaction and teacher retention. Two relational, leader-facilitated behaviors, noted by teachers to increase job satisfaction and reduce retention, are described by teachers as (a) participation in decision making and (b) autonomy (García & Weiss, 2019; Weiss, 1999). Moreover, according to the Learning Policy Institute (2017), "these principals generally describe their leadership responsibilities as facilitators, collaborators, team leaders, or leaders of leaders" adding, "these principals often employ leadership teams, interview teams, or site-based management teams to make school-based decisions" (p. 2) to foster collaboration and create a broader sense of ownership.

Recommendations for Future Research

I am grateful for all the teachers who participated in this study during such trying times; your voices were heard and are outlined herein. As teacher job satisfaction is fluid, surveys should be administered periodically, analyzed to identify concerns, having appropriate targets to achieve said goals, and monitored for progress. School culture is everchanging and different in each school, which impacts a teacher's job satisfaction; therefore, additional studies of organizational climate and teacher job satisfaction (Lester, 1988) should continue to be conducted.

Limitations

This study is limited by certain aspects of its methodology, as EFA contains researcher subjectivity, "stemming from the many methodological decisions a researcher must make to complete a single analysis, with the accuracy of the results largely dependent upon the quality of these decisions" (Beavers et al., 2013, p. 1; see also Henson & Roberts, 2006; Tabachnick & Fidell, 2001). In short, EFA is limited primarily by the researcher's subjective decision(s) during

data analysis and the interpretations of each factor extracted. Moreover, the sample of this study

was not randomly selected and limited to five counties within NYS (Chapter III). Therefore, this

study is not generalizable based on selection style and sample size ($n = 129$). Due to this

limitation, I question how teachers from other counties, states, and countries might differ when

surveyed about teacher job satisfaction.

Personal Reflections

Last, I made some conclusions regarding the entire dissertation process, reflections upon

my own emotions and subjectivity. I was struck by the methodology and statistical analysis of

this venture, to wit, that seemingly unrelated digits could manifest "factors," factors depicting

teachers' actual thoughts, behavior, and secret intention(s) to leave their profession. This is the

power of the EFA analytic process. I was then reassured by the rich and personal qualitative data,

augmenting and enhancing the factors with a robust, yet intimate, "voice" of the participants.

Last, I was taken aback by reflections upon this dissertation; a venture ending, integrating all I

have learned, and the irony that relationships, an emergent theme herein, were forged through the

process.

Closing Thoughts

Through this important research, we are reminded of a very basic tenet of leadership, the

human element, which ponders, "What will distinguish those who thrive will be their ability to

understand what makes their fellow woman or man tick, to forge relationships, and to care for

others" (Pink, 2005).

In sum, teacher job satisfaction is important because it exemplifies the human condition,

albeit in the workplace. Kouzes and Posner (2009) made leadership personal, urging us from

their metaphorical seats:

The best way to lead people into the future is to connect with them deeply in the present.

The only visions that take hold are shared visions—and you will create them only when

you listen very, very closely to others, appreciate their hopes, and attend to their needs.

The best leaders are able to bring their people into the future because they engage in the

oldest form of research: They observe the human condition. (Kouzes & Posner, 2009, p.

1)

In closing, when I began this journey, I was concerned that my research would be devoid

of any eternal significance. Surprisingly, I was instead reminded that the only matters of eternal

weight are the relationships we forge, nurture, and cherish, adapted to the workplace as follows:

the least important word: I.

the most important word: We.

the two most important words: Thank you.

the three most important words: All is forgiven.

the four most important words: What is your opinion?

the five most important words: You did a good job.

the six most important words: I want to understand you better. (Maxwell, 2007; p. 29)

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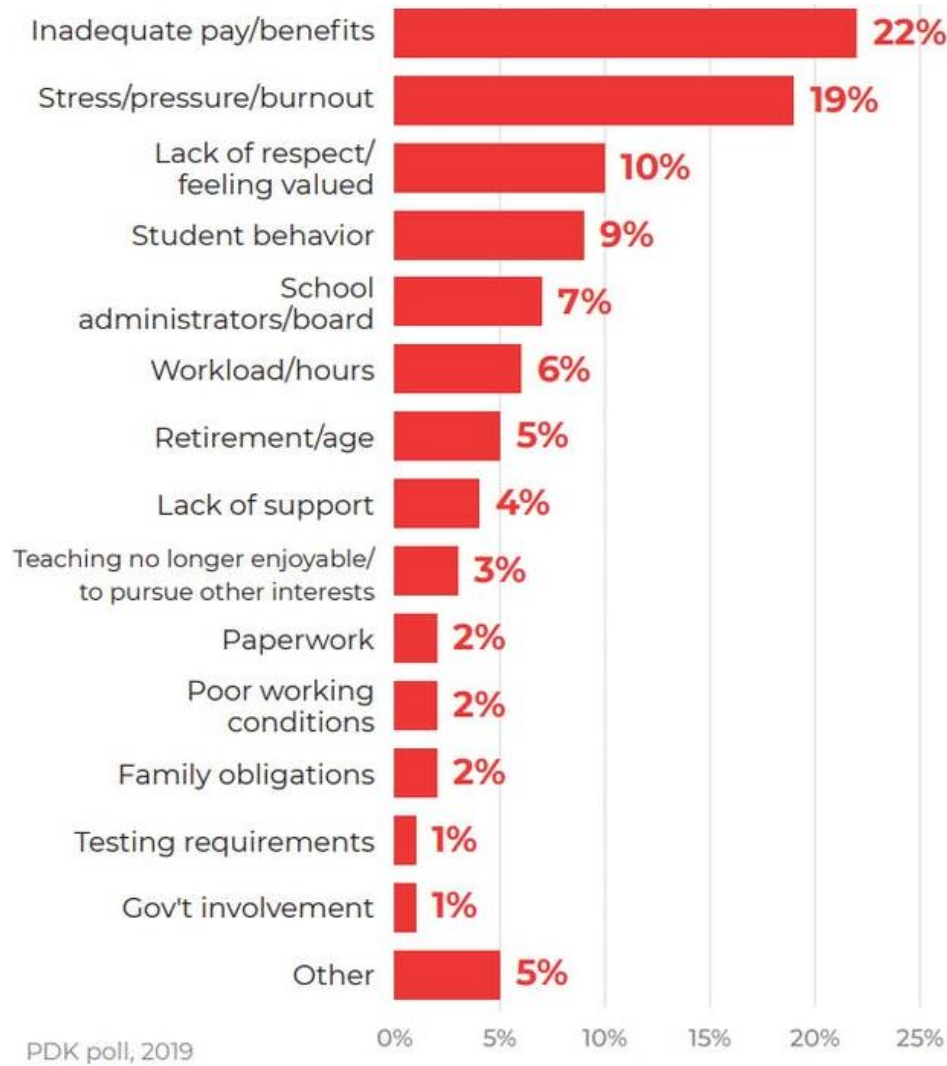
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Appendix A:

Figures

Figure A1

Reasons Teachers Have Conceded Leaving the Profession (PDK, 2019, p. k7).

PDK poll, 2019

Figure A2

Estimated New Teacher Hires Demanded
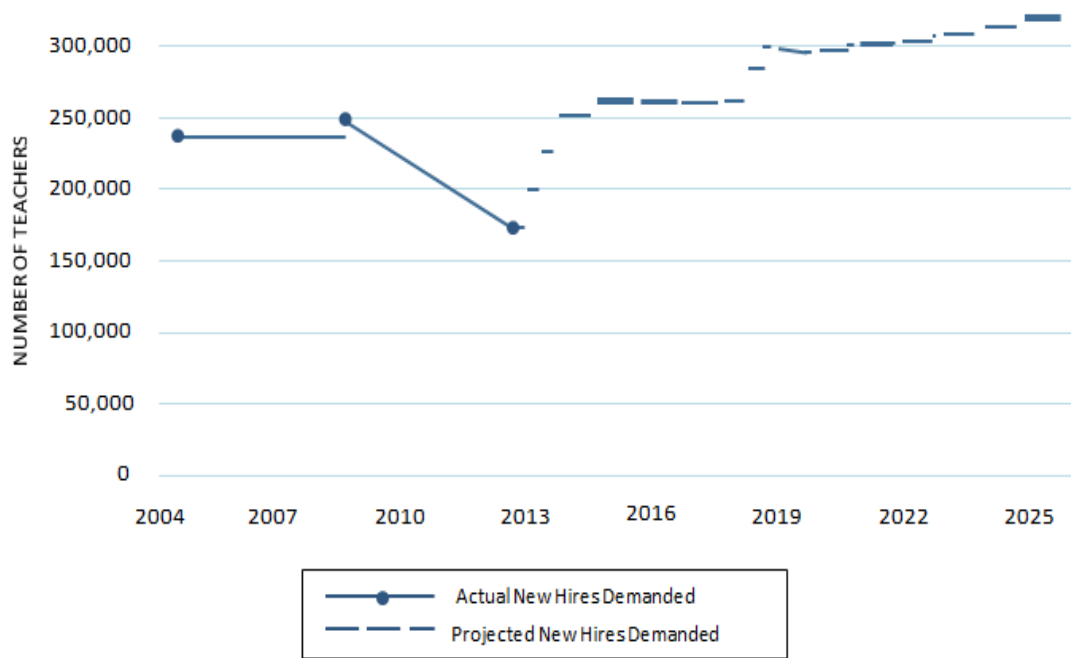
Note. Data for teachers are expressed in full-time equivalents.
Source. U.S. Department of Education, multiple databases.

Figure A3

PDK Poll: Teachers Feeling Fairly Paid (2019)

Source. https://pdkpoll.org/wp-content/uploads/2020/05/pdkpoll51-2019.pdf.
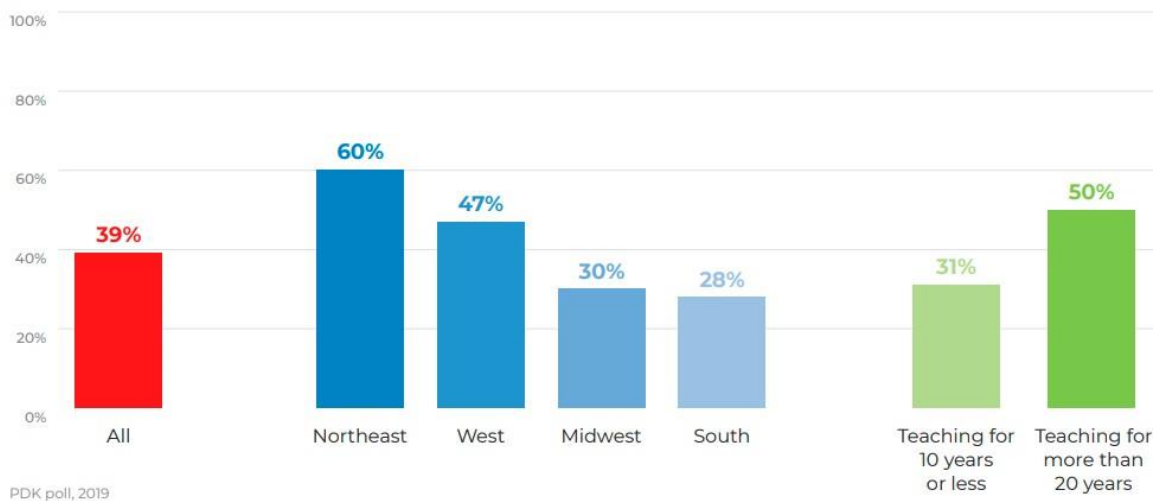
Figure A4

Possibility of Teacher Turnover in Relation to Administrative Support
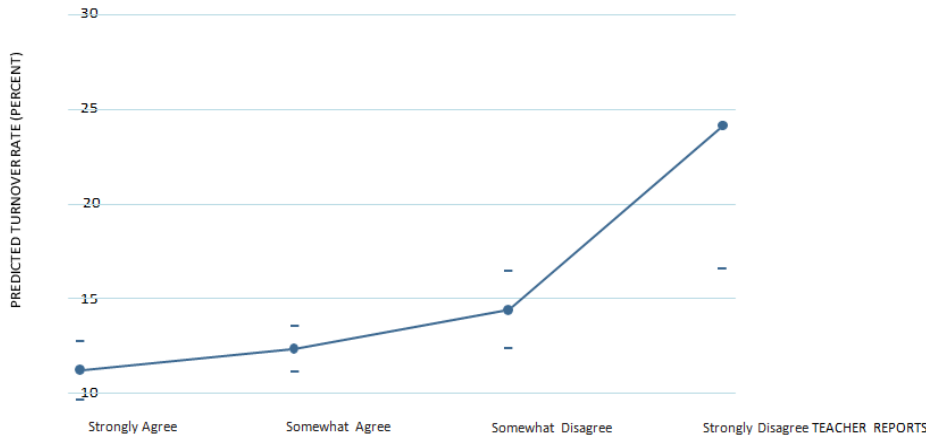
Source: LPI analysis of the Teacher Follow-Up Survey (TFS), 2013, from the Schools and Staffing Survey, National Center for Education Statistics.

Source. Sutcher et al., 2016, p. 52. Teachers' reports about the extent to which their "school administration is supportive."

Figure A5

Maslow's Hierarchy of Needs

Source. https://www.interaction-design.org/literature/article/maslow-s-hierarchy-of-needs.
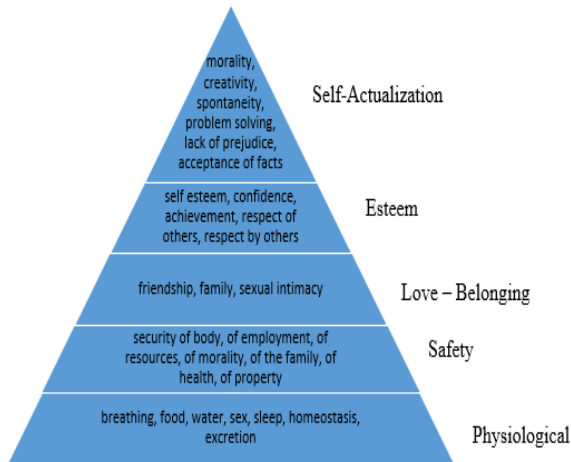
Figure A6

Participants' Highest Degree Achieved
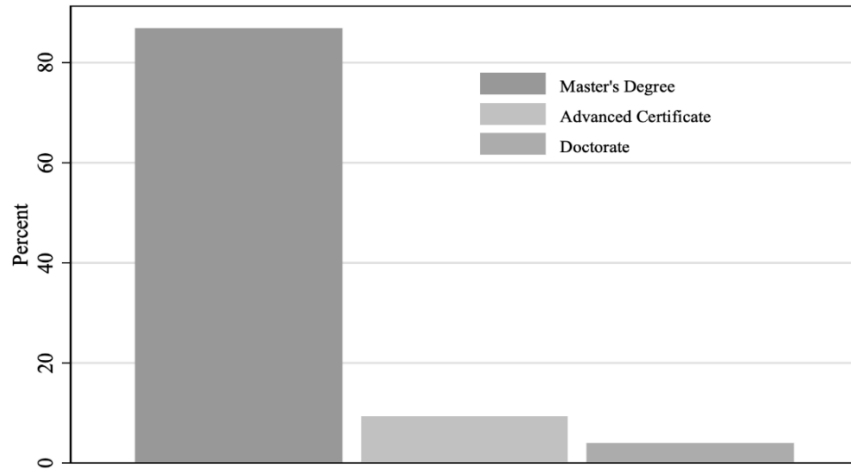
Note: NYS requires teachers to earn a master's degree within five years of initial certification.

Figure A7

Participant Teachers' Experience in Years
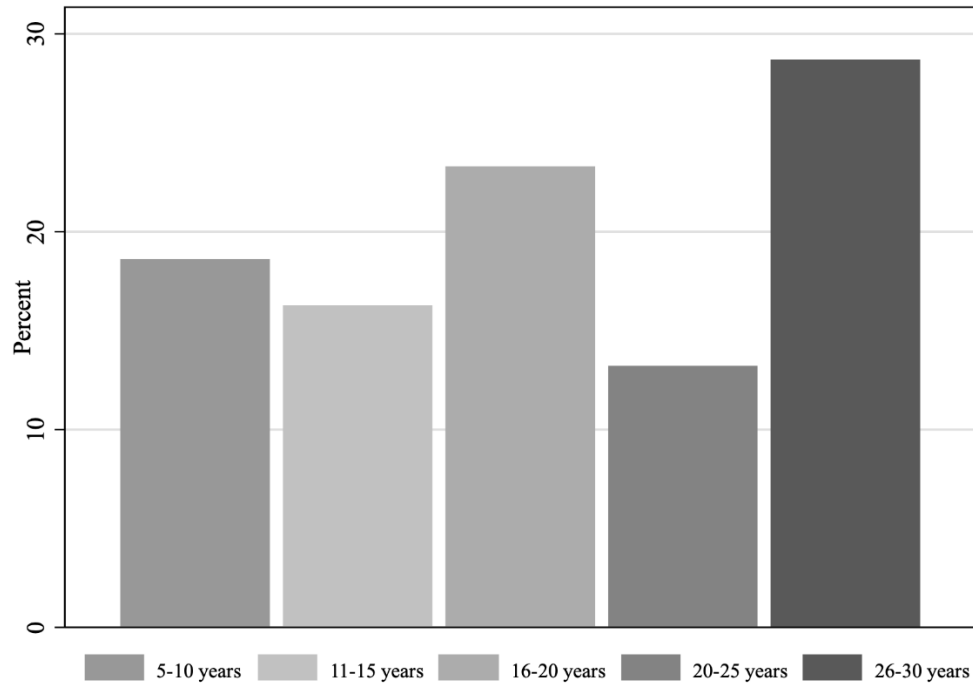
Figure A8

Scree Plot
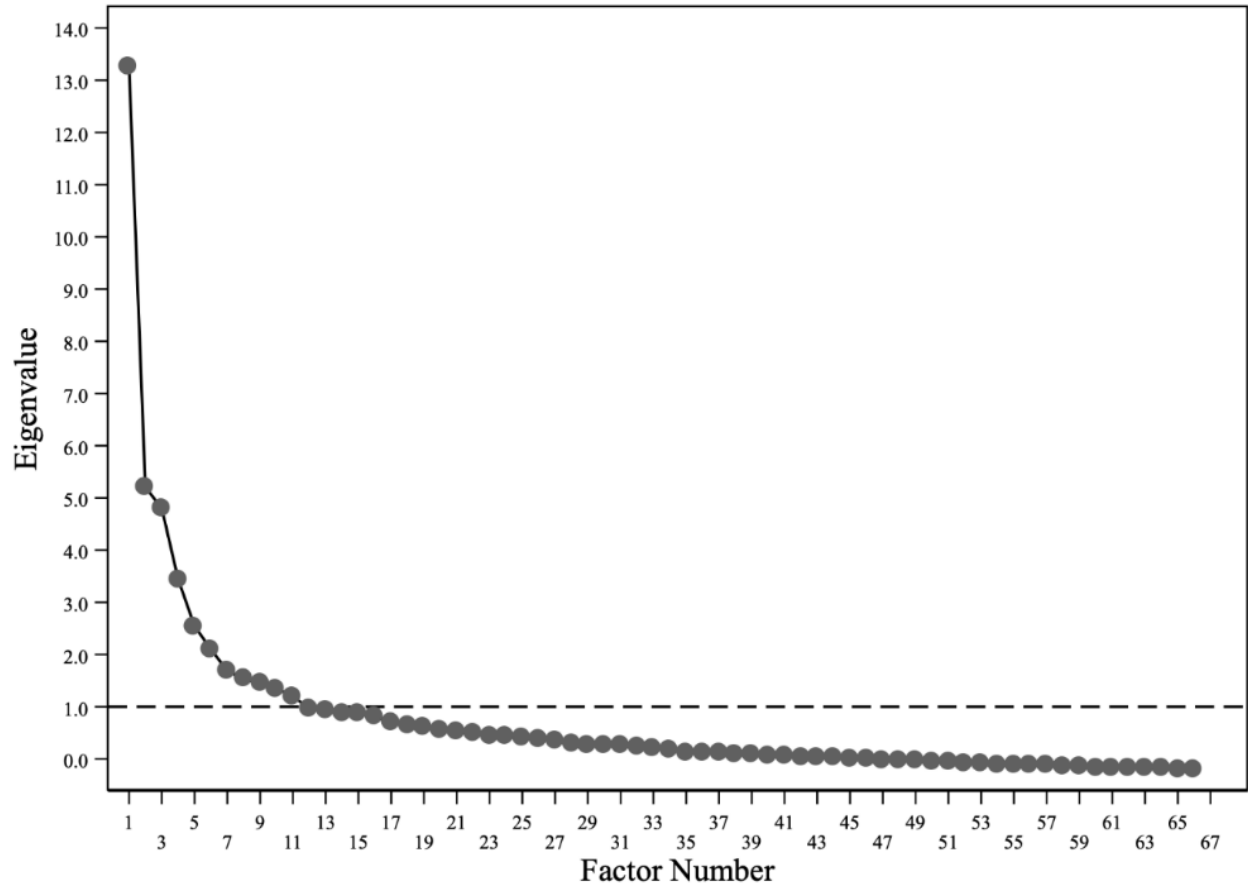
Figure A9

Horn's Parallel Analysis
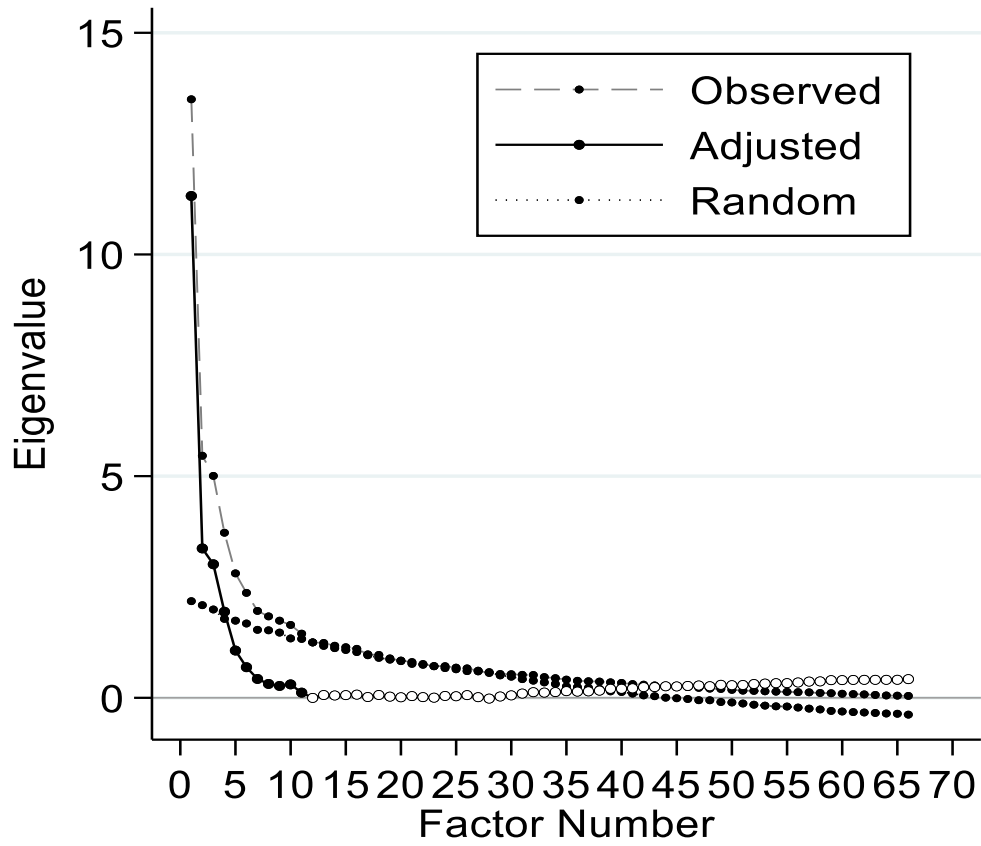
Figure A10

Histogram Comparison
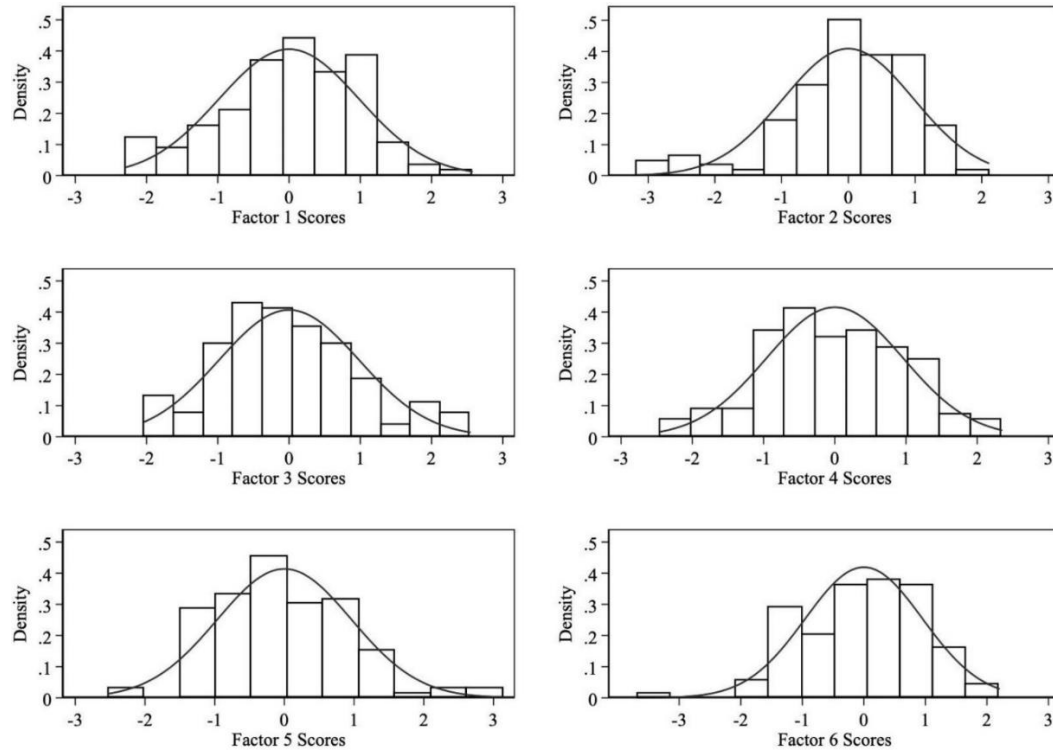
Figure A11

Histogram of F2: by Gender
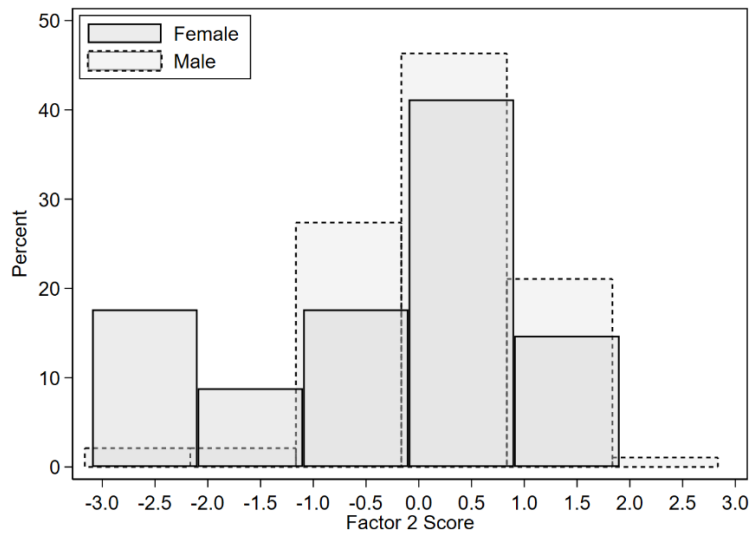
Appendix B:

Teacher Job Satisfaction Questionnaire Survey

<u>Directions:</u> The following statements refer to organizational factors that can influence the way a

teacher feels about his/her job. These factors are related to teaching and to the individual's

perception of the job situation. When answering the following statements, circle the numeral,

which represents the degree to which you agree or disagree with the statement. Please do not

identify yourself on this instrument.

Key:	1	2	3	4	5
	Strongly disagree	Disagree	Neutral (neither disagree nor agree)	Agree	Strongly agree

1. Teaching provides me with an opportunity to advance professionally.   1   2   3   4   5

2. Teacher income is adequate for normal expenses.   1   2   3   4   5

3. Teaching provides an opportunity to use a variety of skills.   1   2   3   4   5

4. Insufficient income keeps me from living the way I want to live.   1   2   3   4   5

5. My immediate supervisor turns one teacher against another.   1   2   3   4   5

6. No one tells me that I am a good teacher.   1   2   3   4   5

7. The work of a teacher consists of routine activities.   1   2   3   4   5

8. I am not getting ahead in my present teaching position.   1   2   3   4   5

9. Working conditions in my school can be improved.   1   2   3   4   5

10. I receive recognition from my immediate supervisor.   1   2   3   4   5

11. I do not have the freedom to make my own decisions.   1   2   3   4   5

12. My immediate supervisor offers suggestions to improve my teaching   1   2   3   4   5

13. Teaching provides for a secure future.   1   2   3   4   5

14. I receive full recognition for my successful teaching.   1   2   3   4   5

15. I get along well with my colleagues.   1   2   3   4   5

16. The administration in my school does not clearly define its   1   2   3   4   5
    policies

17. My immediate supervisor gives me assistance when I need help.   1   2   3   4   5

18. Working conditions in my school are comfortable.   1   2   3   4   5

19. Teaching provides me the opportunity to help my students learn. 1   2   3   4   5

20. I like the people with whom I work.   1   2   3   4   5

21. Teaching provides limited opportunities for advancement.   1   2   3   4   5

22. My students respect me as a teacher.   1   2   3   4   5

23. I am afraid of losing my teaching job.   1   2   3   4   5

24. My immediate supervisor does not back me up.   1   2   3   4   5

25. Teaching is very interesting work.   1   2   3   4   5

26. Working conditions in my school could be worse.   1   2   3   4   5

27. Teaching discourages originality.   1   2   3   4   5

28. The administration in my school communicates its policies well. 1   2   3   4   5

29. I never feel secure in my teaching job.   1   2   3   4   5

30. Teaching does not provide me the chance to develop new   1   2   3   4   5
    methods.

31. My immediate supervisor treats everyone equitably.   1   2   3   4   5

32. My colleagues stimulate me to do better work.   1   2   3   4   5

33. Teaching provides an opportunity for promotion.   1   2   3   4   5

34. I am responsible for planning my daily lessons.   1   2   3   4   5

35. Physical surroundings in my school are unpleasant.   1   2   3   4   5

36. I am well paid in proportion to my ability.   1   2   3   4   5

37. My colleagues are highly critical of one another.   1   2   3   4   5

38. I do have responsibility for my teaching.   1   2   3   4   5

39. My colleagues provide me with suggestions or feedback about my   1   2   3   4   5
    teaching.

40. My immediate supervisor provides assistance for improving   1   2   3   4   5
    instruction.

41. I do not get cooperation from the people I work with.   1   2   3   4   5

42. Teaching encourages me to be creative.   1   2   3   4   5

43. My immediate supervisor is not willing to listen to suggestions.   1   2   3   4   5

44. Teacher income is barely enough to live on.   1   2   3   4   5

45. I am indifferent toward teaching.   1   2   3   4   5

46. The work of a teacher is very pleasant.   1   2   3   4   5

47. I receive too many meaningless instructions from my immediate   1   2   3   4   5
    supervisor.

48. I dislike the people with whom I work.   1   2   3   4   5

49. I receive too little recognition.   1   2   3   4   5

50. Teaching provides a good opportunity for advancement.   1   2   3   4   5

51. My interests are similar to those of my colleagues.   1   2   3   4   5

52. I am not responsible for my actions.   1   2   3   4   5

53. My immediate supervisor makes available the material I need to do   1   2   3   4   5
    my best.

54. I have made lasting friendships among my colleagues.   1   2   3   4   5

55. Working conditions in my school are good.   1   2   3   4   5

56. My immediate supervisor makes me feel uncomfortable.   1   2   3   4   5

57. Teacher income is less than I deserve.   1   2   3   4   5

58. I try to be aware of the policies of my school.   1   2   3   4   5

59. When I teach a good lesson, my immediate supervisor notices.   1   2   3   4   5

60. My immediate supervisor explains what is expected of me.   1   2   3   4   5

61. Teaching provides me with financial security.   1   2   3   4   5

62. My immediate supervisor praises good teaching.   1   2   3   4   5

63. I am not interested in the policies of my school.   1   2   3   4   5

64. I get along well with my students.   1   2   3   4   5

65. Pay compares with similar jobs in other school districts.   1   2   3   4   5

66. My colleagues seem reasonable to me.   1   2   3   4   5

PERSONAL DATA FORM

Sex: Male_____ Female_____

Age: _____

Marital Status: Married_____ Divorced_____ Separated_____ Single_____ Widowed_____

Number of years teaching experience: _____

Number of years teaching experience in this school district: _____

Tenure: Yes_____ No_____

Highest academic degree attained:

B.A./S._____ M.A.+30_____ Doctorate_____

     M.A./S._____ M.A.+60_____Other (specify)_____

Union affiliation: Member_____ Nonmember_____

School level: Elementary_____ Junior High/Middle school_____ High School_____

If other than elementary, department:

Art/music_____   Physical education_____

English_____   Science_____

Foreign Language_____   Secretarial studies_____

Home Economics/Industrial Arts_____   Social Studies_____

Mathematics_____   Other (specify)_____

Appendix C:

Tables

Table C1

Definition of Nine Final Factors of Teacher Job Satisfaction Questionnaire

Factor	Definition
Supervision	The task-oriented behavior and person-oriented behavior of the immediate supervisor.
Colleagues	The workgroup and social interaction among fellow teachers.
Working Conditions	The working environment and aspects of the physical environment.
Pay	Annual income.
Responsibility	The opportunity to be accountable for one's own work and the opportunity to take part in policy or decision-making activities.
Work Itself	The job of teaching or the tasks related to the job. The freedom to institute innovative materials and to utilize one's skills and abilities in designing one's work. The freedom to experiment and to influence or control what goes on in the job.
Advancement	The opportunity for promotion.
Security	The school's policies regarding tenure, seniority, layoffs, pension, retirement, and dismissal.
Recognition	Some act of notice, blame, praise, or criticism.

Table C2

Results of HPA for Principal Factors 1980 Iterations, Using the Mean Estimate

Component or Factor	Adjusted λ	Unadjusted λ	Estimated Bias
1	11.32	13.50	2.18
2	3.37	5.46	2.09
3	3.01	5.01	1.99
4	1.94	3.72	1.78
5	1.07	2.81	1.74
6	0.69	2.37	1.68
7	0.43	1.96	1.53
8	0.31	1.84	1.52
9	0.27	1.74	1.47
10	0.30	1.64	1.34
11	0.12	1.45	1.33
12	0.00	1.25	1.25
13	0.06	1.24	1.17
14	0.05	1.17	1.12
15	0.06	1.14	1.08
16	0.07	1.11	1.03
17	0.02	0.98	0.96
18	0.07	0.97	0.90
19	0.03	0.89	0.86
20	0.01	0.84	0.83
21	0.04	0.81	0.77
22	0.02	0.76	0.75
23	0.00	0.72	0.71
24	0.04	0.71	0.67
25	0.04	0.68	0.64
26	0.06	0.66	0.60
27	0.02	0.61	0.60
28	-0.02	0.56	0.58
29	0.03	0.54	0.51
30	0.06	0.53	0.48
31	0.10	0.52	0.42
32	0.13	0.52	0.39
33	0.12	0.47	0.35
34	0.13	0.44	0.31
35	0.15	0.41	0.26
36	0.14	0.38	0.24
37	0.15	0.37	0.23
38	0.16	0.37	0.20
39	0.20	0.35	0.15
40	0.21	0.34	0.13
41	0.21	0.31	0.10
42	0.24	0.30	0.06
43	0.24	0.28	0.04
44	0.26	0.27	0.00
45	0.26	0.25	-0.01

Table C3

Six Factors Rotated Using Varimax Orthogonal Rotation with Kaiser

Factor	λ	Diff.	Prop.	Cum.
Factor 1	9.18	3.88	0.19	0.19
Factor 2	5.31	0.21	0.11	0.30
Factor 3	5.10	0.68	0.11	0.40
Factor 4	4.42	0.35	0.09	0.49
Factor 5	4.07	0.78	0.08	0.58
Factor 6	3.28		0.07	0.65

Table C4

Results of HPA for Principal Factors 1980 Iterations, Using the Mean Estimate

Item	F1	F2	F3	F4	F5	F6	h^2	Statements
q62	**0.805**	0.027	−0.005	0.157	−0.044	0.129	0.692	My immediate supervisor praises good teaching
q59	**0.786**	0.047	−0.078	0.030	−0.068	0.206	0.674	When I teach a good lesson, my immediate supervisor notices
q40	**0.759**	−0.073	−0.043	0.083	0.171	0.133	0.638	My immediate supervisor provides assistance for improving instruction
q10	**0.745**	−0.063	−0.037	0.306	−0.064	0.156	0.682	I receive recognition from my immediate supervisor
q60	**0.741**	0.058	−0.002	−0.088	0.003	0.078	0.566	My immediate supervisor explains what is expected of me
q31	**0.724**	0.126	−0.039	0.021	0.009	−0.003	0.542	My immediate supervisor treats everyone equitably
q17	**0.723**	−0.001	0.061	−0.009	−0.121	0.060	0.545	My immediate supervisor gives me assistance when I need help
q24	**−0.671**	−0.053	0.161	−0.039	0.267	−0.021	0.553	My immediate supervisor does not back me up
q49	**−0.618**	−0.113	0.043	−0.274	0.179	−0.217	0.551	I receive too little recognition
q43	**−0.608**	−0.258	0.025	0.090	0.274	−0.190	0.556	My immediate supervisor is not willing to listen to suggestions
q53	**0.597**	0.058	−0.093	0.156	−0.148	0.097	0.424	My immediate supervisor makes available the material I need to do my best
q56	**−0.596**	−0.177	0.164	0.082	0.265	0.123	0.506	My immediate supervisor makes me feel uncomfortable
q12	**0.590**	−0.007	−0.014	−0.024	0.292	0.043	0.436	My immediate supervisor offers suggestions to improve my teaching
q47	**−0.562**	−0.066	0.233	−0.086	0.317	−0.046	0.485	I receive too many meaningless instructions from my immediate supervisor
q06	**−0.539**	−0.020	−0.114	−0.046	0.134	**−0.400**	0.484	No one tells me that I am a good teacher
q05	**−0.537**	−0.206	0.159	0.065	0.258	−0.004	0.427	My immediate supervisor turns one teacher against another
q14	**0.511**	0.025	−0.083	0.275	−0.221	**0.485**	0.629	I receive full recognition for my successful teaching
q11	**−0.404**	−0.093	0.262	−0.097	0.318	−0.113	0.364	I do not have the freedom to make my own decisions
q48	−0.073	**−0.799**	0.126	−0.112	0.235	−0.075	0.734	I dislike the people with whom I work
q15	0.028	**0.788**	0.001	0.087	−0.034	0.001	0.630	I get along well with my colleagues
q20	0.022	**0.785**	0.026	0.082	−0.009	0.125	0.639	I like the people with whom I work
q66	−0.069	**0.702**	0.009	0.034	−0.215	0.127	0.561	My colleagues seem reasonable to me
q37	−0.214	**−0.679**	0.041	0.091	0.109	−0.016	0.529	My colleagues are highly critical of one another

Item	F1	F2	F3	F4	F5	F6	h²	Statements
q32	0.191	**0.639**	0.004	0.218	−0.008	0.064	0.496	My colleagues stimulate me to do better work
q41	−0.198	**−0.637**	0.042	−0.172	0.179	−0.094	0.518	I do not get cooperation from the people I work with
q54	−0.067	**0.567**	−0.077	0.117	0.121	0.155	0.384	I have made lasting friendships among my colleagues
q39	0.175	0.351	0.084	0.160	0.166	0.210	0.258	My colleagues provide me with suggestions or feedback about my teaching
q63	−0.041	−0.325	−0.032	−0.256	0.024	0.116	0.188	I am not interested in the policies of my school
q44	−0.063	−0.050	**0.826**	−0.040	0.027	−0.070	0.695	Teacher income is barely enough to live on
q04	−0.093	−0.124	**0.803**	0.061	−0.011	0.019	0.674	Insufficient income keeps me from living the way I want to live
q57	−0.203	0.026	**0.792**	0.057	0.012	−0.033	0.673	Teacher income is less than I deserve
q36	0.147	−0.038	**−0.791**	0.057	0.075	0.085	0.664	I am well paid in proportion to my ability
q61	−0.022	0.136	**−0.789**	−0.024	0.035	0.000	0.644	Teaching provides me with financial security
q02	0.048	0.020	**−0.787**	−0.029	0.138	0.021	0.642	Teacher income is adequate for normal expenses
q13	0.060	−0.010	**−0.563**	0.290	−0.112	0.089	0.426	Teaching provides for a secure future
q23	0.202	0.121	**0.441**	−0.201	0.307	0.054	0.387	I am afraid of losing my teaching job
q65	0.147	−0.092	−0.367	−0.099	0.263	0.169	0.272	Pay compares with similar jobs in other school districts
q25	0.127	0.055	−0.044	**0.659**	−0.167	0.087	0.491	Teaching is very interesting work
q22	−0.006	−0.043	−0.002	**0.589**	0.099	0.020	0.359	My students respect me as a teacher
q19	0.055	0.147	0.048	**0.579**	0.051	0.008	0.365	Teaching provides me the opportunity to help my students learn
q42	0.057	0.123	0.072	**0.569**	−0.216	0.078	0.400	Teaching encourages me to be creative
q30	−0.038	0.104	0.259	**−0.542**	0.309	−0.105	0.480	Teaching does not provide me the chance to develop new methods
q38	0.053	0.269	0.030	**0.510**	−0.011	0.081	0.342	I do have responsibility for my teaching
q45	−0.012	−0.315	0.045	**−0.501**	0.221	−0.079	0.407	I am indifferent toward teaching
q27	−0.142	−0.183	0.035	**−0.499**	0.234	−0.048	0.361	Teaching discourages originality
q64	0.094	−0.063	−0.011	**0.480**	−0.030	0.044	0.246	I get along well with my students
q03	0.009	0.033	−0.031	**0.474**	−0.045	0.197	0.268	Teaching provides an opportunity to use a variety of skills
q58	0.023	0.347	−0.047	**0.407**	0.132	−0.190	0.343	I try to be aware of the policies of my school
q46	0.219	0.003	0.062	0.373	−0.165	0.268	0.290	The work of a teacher is very pleasant
q34	−0.140	0.082	−0.048	0.329	0.037	−0.059	0.141	I am responsible for planning my daily lessons

Item	F1	F2	F3	F4	F5	F6	h^2	Statements
q55	0.324	0.186	−0.153	0.121	**−0.638**	0.305	0.678	Working conditions in my school are good
q35	−0.206	−0.086	−0.067	−0.166	**0.624**	−0.147	0.493	Physical surroundings in my school are unpleasant
q18	**0.434**	0.153	0.059	0.069	**−0.616**	0.173	0.629	Working conditions in my school are comfortable
q28	**0.419**	0.146	0.124	0.103	**−0.547**	0.054	0.525	The administration in my school communicates its policies well
q16	**−0.408**	−0.012	−0.012	0.029	**0.496**	−0.043	0.415	The administration in my school does not clearly define its policies
q09	−0.328	−0.129	0.074	−0.006	**0.477**	−0.228	0.409	Working conditions in my school can be improved
q26	0.077	0.064	0.210	0.101	**−0.438**	−0.081	0.263	Working conditions in my school could be worse
q29	0.154	−0.135	0.252	−0.236	**0.418**	−0.118	0.350	I never feel secure in my teaching job
q07	0.005	0.031	−0.024	−0.029	0.382	−0.049	0.150	The work of a teacher consists of routine activities
q33	0.353	0.210	−0.068	0.066	−0.028	**0.669**	0.627	Teaching provides an opportunity for promotion
q50	0.349	0.203	−0.149	0.069	−0.112	**0.669**	0.649	Teaching provides a good opportunity for advancement
q08	−0.099	−0.068	0.061	−0.271	0.248	**−0.610**	0.524	I am not getting ahead in my present teaching position
q21	−0.257	−0.187	0.252	−0.049	0.054	**−0.575**	0.500	Teaching provides limited opportunities for advancement
q01	0.102	0.060	−0.020	0.190	−0.088	**0.449**	0.259	Teaching provides me with an opportunity to advance professionally
q51	0.019	0.382	−0.016	−0.142	−0.146	**0.401**	0.350	My interests are similar to those of my colleagues
q52	−0.150	−0.233	0.051	−0.279	0.157	0.303	0.274	I am not responsible for my actions

Note. Six-factor solution using varimax orthogonal rotation (Kaiser).

Table C5

Factor 1: Supportive and Appreciative Supervisors

Item	F1	h^2	Statement
q62	0.805	0.692	My immediate supervisor praises good teaching
q59	0.786	0.974	When I teach a good lesson, my immediate supervisor notices
q10	0.759	0.682	I receive recognition from my immediate supervisor
q60	0.741	0.566	My immediate supervisor explains what is expected of me
q31	0.724	0.542	My immediate supervisor treats everyone equitably
q17	0.723	0.545	My immediate supervisor gives me assistance when I need help
q24	−0.671	0.553	My immediate supervisor does not back me up
q49	−0.618	0.551	I receive too little recognition
q43	−0.608	0.556	My immediate supervisor is not willing to listen to suggestions
q53	0.597	0.424	My immediate supervisor makes available the material I need to do my best
q56	−0.596	0.506	My immediate supervisor makes me feel uncomfortable
q12	0.590	0.436	My immediate supervisor offers suggestions to improve my teaching
q47	−0.562	0.485	I receive too many meaningless instructions from my immediate supervisor
q06	−0.539	0.484	No one tells me that I am a good teacher
q05	−0.537	0.427	My immediate supervisor turns one teacher against another
q14	0.511	0.629	I receive full recognition for my successful teaching
q11	−0.404	0.364	I do not have the freedom to make my own decisions

Table C6

Factor 2: Collegiality and Workplace Relationships

Item	Factor 2	*h*²	Statement
q48	−0.799	0.734	I dislike the people with whom I work
q15	0.788	0.63	I get along well with my colleagues
q20	0.785	0.639	I like the people with whom I work
q66	0.702	0.561	My colleagues seem reasonable to me
q37	−0.679	0.529	My colleagues are highly critical of one another
q32	0.639	0.496	My colleagues stimulate me to do better work
q41	−0.637	0.518	I do not get cooperation from the people I work with
q54	0.567	0.384	I have made lasting friendships among my colleagues

Table C7

Factor 3: Income and Job Security

Item	Factor 3	h^2	Statement
q44	0.826	0.695	Teacher income is barely enough to live on
q04	0.803	0.674	Insufficient income keeps me from living the way I want to live
q57	0.792	0.673	Teacher income is less than I deserve
q36	−0.791	0.664	I am well paid in proportion to my ability
q61	−0.789	0.644	Teaching provides me with financial security
q02	−0.787	0.642	Teacher income is adequate for normal expenses
q13	−0.563	0.426	Teach provides a secure future
q23	0.441	0.387	I am afraid of losing my teaching job
q65	−0.367	0.272	Pay compares with similar jobs in other school districts

Table C8

Factor 4: Autonomy, Creativity at Work, and Student Relationship

Item	Factor 4	h^2	Statement
q25	0.659	0.491	Teaching is very interesting work
q22	0.589	0.359	My students respect me as a teacher
q19	0.579	0.365	Teaching provides me the opportunity to help my students learn
q42	0.569	0.4	Teaching encourages me to be creative
q30	−0.542	0.48	Teaching does not provide me the chance to develop new methods
q38	0.51	0.342	I do have responsibility for my teaching
q45	−0.501	0.407	I am indifferent toward teaching
q27	−0.499	0.361	Teaching discourages originality
q64	0.48	0.246	I get along well with my students
q03	0.474	0.268	Teaching provides an opportunity to use a variety of skills
q58	0.407	0.343	I try to be aware of the policies of my school

Table C9

Factor 5: Working Conditions and School Culture

Item	Factor 5	h²	Statement
q55	−0.638	0.678	Working conditions in my school are good
q35	0.624	0.493	Physical surroundings in my school are unpleasant
q18	−0.616	0.629	Working conditions in my school are comfortable
q28	−0.547	0.525	The administration in my school communicates its policies well
q16	0.496	0.415	The administration in my school does not clearly define its policies
q09	0.477	0.409	Working conditions in my school can be improved
q26	−0.438	0.263	Working conditions in my school could be worse
q29	0.418	0.35	I never feel secure in my teaching job

Table C10

Factor 6: Advancement and Professional Growth

Item	Factor 6	h^2	Statement
q33	0.669	0.627	Teaching provides an opportunity for promotion
q50	0.669	0.649	Teaching provides a good opportunity for advancement
q08	−0.61	0.524	I am not getting ahead in my present teaching position
q21	−0.575	0.5	Teaching provides limited opportunities for advancement
q01	0.449	0.259	Teaching provides me with an opportunity to advance professionally
q51	0.401	0.35	My interests are similar to those of my colleagues

Table C11

T-test of Factor 2 and Sex

Group	Obs.	Mean	Std. Err.	*SD*	95% Conf. Interval	
Male	34	−0.34	0.22	1.28	−0.79	0.10
Female	95	0.12	0.08	0.82	−0.04	0.29
combined	129	−3.70E-10	0.09	0.98	−0.17	0.17
diff		−0.46	0.19		−0.84	−0.08

Notes. diff = mean (male) – mean (female), $t = -2.42$, Ho: diff = 0, degrees of freedom = 127, Ha: diff < 0, Ha: diff! = 0, Ha: diff > 0, Pr(T < t) = 0.0085, Pr(|T| > |t|) = 0.0170, Pr(T > t) = 0.99.

Appendix D:

Teacher Job Satisfaction Questionnaire Manual

Dr. Paula E. Lester

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Variable Description

There have been a number of instruments used in the private sector, but this instrument was developed specifically for the use in various educational settings. The TJSQ consists of 66 items: 14 items on supervision, 10 items on colleagues, 7 items on working conditions, 7 items on pay, 8 items on responsibility, 9 items on work itself, 5 items on advancement, 3 items on security, and 3 items on recognition. After selections of the questionnaire format and content, the items were edited into a form specifically geared to teachers in an educational setting. Language that was familiar and appropriate to the population was used. Only one piece of information was requested in each statement. Vaguely defined words (e.g., several, most, usually), words with double meanings, emotionally loaded words, double negatives, and unclear words were eliminated, resulting in clear, concise, and direct statements of no more than 20 words. Fifty percent of the items were written in a positive form and 50% in a negative form to avoid response set.

Definition

Job satisfaction is defined as the extent to which the teachers perceived and values various factors (job characteristics) of the work situation. Nine factors are identified and defined in Table D1.

To generate a taxonomy for the development of this instrument, the theories of Maslow and Herzberg were explored as sources of job satisfaction. These theories contain specific

concepts that correspond to the factors logically found in an educational setting, and were

identified in the development of the TJSQ. Consequently, their theories provide a system of

classification that supports the conceptual foundation of the study. In addition to the theoretical

literature of Maslow and Herzberg, numerous references (JDI) are also found in the general

literature relating to job satisfaction which support the selection of these factors.

Sample

The population from which the sample was drawn to develop this instrument included

teachers from New York City, Westchester, Nassau, and Suffolk Counties. Within each of these

four geographic locations, a sample of two school districts was randomly selected by using a

table of random numbers. Within each of the eight school districts thus identified, an elementary,

junior high school, and a senior high school were randomly selected, if appropriate. Of the 1,600

instruments and personal data forms distributed to teachers in these schools, 631 returns were

received from all eight districts, providing 620 usable returns.

Reliability

Upon completion of the final factor solution, tests of reliability were run for the total and

for each of the nine factors (subscales). The internal consistency of the TJSQ was determined

through computation of an α coefficient. The total scale α for the sample ($N = 526$) was 0.93.

The scale coefficients range from 0.71 (security) to 0.92 (supervision). Data were cross-validated

using a split-sample technique. The α coefficient for each factor and total scale α coefficient are

reported in Table D2. The means, SDs, and α (if item deleted) are available.

Validity

Content Validity

To ensure validity, a representative sample of items was generated from the literature on job satisfaction. The content of the instrument was examined by several experts in the field, and the plan and procedures for the construction of the instrument were evaluated in terms of (a) instruction, (b) ordering of items, and (c) selection of items.

Content validation was accomplished through a modified *Q* sort by faculty and graduate students. Statements with less than 80% agreement were either rewritten or rejected. The items were evaluated on the basis of length, intelligibility, and redundancy as well as their content specificity to an educational setting. Thus, a representative sample of items was developed, generating an initial pool of 120 items.

Criterion Validity

For this study, criterion validity was not obtained. One method of establishing criterion validity is through correlating the newly created instrument with another instrument measuring the same concepts. However, the primary purpose of this study was to develop an instrument to measure teacher job satisfaction, as none existed in education. Therefore, establishing criterion validity through this method was unfeasible (the TJSQ does contain similar scales to the Job Description Index). Another technique for establishing criterion validity is the known-group technique. This calls for identifying a group of satisfied teachers and a group of dissatisfied teachers, administering the instrument, and performing a *t*-test to analyze how well the instrument discriminates between groups. No such groups were identified, and thus, no attempt was made in this study to establish criterion validity.

Construct Validity

The literature indicates that factor analysis is perhaps the most powerful method of construct validation, because it discovers the variables that fit together and the relations among them. Factor analysis was therefore used to determine clusters of related variables.

Factor Structure

Factor analysis was undertaken as an exploratory technique to discover underlying factors and patterns among variables and also as a psychometric procedure for the development and refinement of the TJSQ. The SSPS statistical procedure being used and the missing data option selection determined treatment of missing data (incomplete returns). In general, the default missing data option (listwise deletion) was used, resulting in the exclusion of missing data from the computations. Consequently, the number of cases used in the factor analysis and reliability was 526. This sample size was adequate to obtain a stable factor solution for the 66 questionnaire items.

Multiple factor analyses were performed until nine interpretable factors with eigenvalues equal to or greater than 1.0 were extracted, using orthogonal varimax solution. The identification of these nine factors is consistent with the conceptual rationale for the study and is supported by the literature.

This nine-factor solution met the criteria for simple structure suggested by Thurstone as one way of determining the acceptability of a factor solution. Items with factor loadings of less than 0.30 were eliminated.

The factor loadings, communalities, item reversals, eigenvalues, percent of variance, and percent of cumulative variance of the nine factors from the unrotated factor matrix are reported in Table D3-D11.

The terminal factor solution was cross-validated using a split-sample technique. A random sample was generated (0.60 of *N* = 620) and the factor solution was repeated (principal factor with iteration using a varimax rotation).

Scoring the TJSQ

The questionnaire consists of 66 statements, each expressing a concern about teacher job satisfaction. Respondents indicate the degree of agreements or disagreement with a specific statement marking a number next to each statement on a 1 to 5 scale. For unfavorable items (see Table D3), the scoring system is revered. Thus, a low score represents low job satisfaction, and a high score represents a high job satisfaction.

The 66 statements in the TJSQ were carefully selected to represent nine areas of job satisfaction. Table 3 shows the item numbers and statements, arranged according to the nine factors of teacher job satisfaction.

The TJSQ was factor analyzed with an orthogonal varimax rotation that yielded nine independent, uncorrelated subscales each measuring a specific aspect of teacher job satisfaction. Therefore, the best use of this instrument is to score each of the nine subscales of dimensions of teacher job satisfaction as separate variables. For example, the subscale Supervision has 14 items. The lowest possible score is 14 and the highest possible score is 7 (refer to Table D2 for raw score range). This offers a true representation for a particular respondent on a specific aspect of teacher job satisfaction.

Scoring for each of the nine subscales of the TJSQ is a relatively easy process. The easiest method when there is a large sample is to employ some scoring procedures that can be found in most comprehensive statistical packages; such as the SPSS factor score program associated with factor analysis (refer to SPSS factor procedure, pp. 502-508). This is a

standardized weighted factor score for each respondent on the nine factors of the TJSQ, which

provides a more accurate estimate for scoring data than the mean score. A second method uses

any major statistical program like SPSS and consists of a combination of RECODE and

COMPUTE statements. All of the reversed items (see Table D3-D11 on factor structure for

reversed items) must first be removed, and then it is necessary to write a compute statement for

all of the nine subscales. The RECODE and nine COMPUTE statements are included in Table

D12.

The TJSQ may be hand-scored when only a small number of questionnaires are to be

processed. The first step is to do the reversals (see Table 3 for item reversals; 1 = 5, 2 = 4, 3 = 3,

4 = 2, and 5 = 1). After the items are reversed, simply add up the responses across items that are

included in each subscale for each respondent. For example, the subscale Supervision is

composed of the following items: *5, 10, 12, 17, *24, 31, 40, *43, *47, 53, *56, 59, 60, and 62.

Reverse scores for the items with an asterisk (5, 24, 43, 47, and 56) and then add the scores for

each statement.

Administration and Computation

The TJSQ does not require any specific conditions to administer. It may be administered

in group or individual settings.

If self-administered allow about 15-20 minutes. The Likert scale registers the degree of

agreement or disagreement with a specific statement. For favorable items, the strongly disagree

receives 1 point, 2 for disagree, 3 for neutral (neither agree or disagree), 4 for agree, and 5 for

strongly agree. For unfavorable statements, the scoring system is reversed. Thus, a low score

represents low job satisfaction, and a high score represents high satisfaction.

Interpretation of the TJSQ

Based upon the varimax factor rotation, nine independent variables were created. Therefore, none separate factors should be interpreted, instead of an overall composite score. Information for each respondent on each of the nine subscales may be obtained and then analyzed in terms of each subscale.

The data on the TJSQ can be interpreted at several different levels of detail. The simplest form of interpretation is to identify the scale means and *SD*s for the entire group and compare them to the total scale means and standard deviations (see Table D2). A more detailed interpretation can be developed by examining differences based upon geographic location (suburban or urban), size of the school district (small or large), and school level (elementary, junior high/middle school, or senior high school).

While each teacher provides an individual response, the presentation of results combines all staff members' responses within a school of school district to arrive at a school score for each subscale. One vehicle for feedback is a school profile which provides a visual presentation of teacher job satisfaction on the particular factor within a school.

The school profile contains nine separate measures of teacher job satisfaction. Standard deviation units may be used to compare schools, districts, school levels, etc. Graphically, zero is equal to the mean of means; therefore, by using standard deviations it is possible to describe schools as above or below the mean. Some score will be high, modest, or low. These scores are based upon teachers' perceptions about specific aspects of their work.

Therefore, the TJSQ is an excellent vehicle for staff development because it may be used as an assessment tool to pinpoint actual or potential problems in a school or school district that may be overlooked. Once the organizational assessment is complete, the data obtained by

analyzing the TJSQ provide immediate feedback. The areas that the staff are satisfied are

dissatisfied with will be identified. The positive areas should be reinforced and the negative areas

need work; these are the areas of weakness that need staff development. Each subscale provides

information for feedback, staff development, and in-service education.

Results and Comments

When analyzed by location (suburban or urban), Supervision, Working Conditions, Pay,

Work Itself, and Advancement demonstrated significant differences at the .05 level. Suburban

districts were more satisfied than were urban districts, except for the factor of Supervision.

Analysis by the variable of size (small or large district) showed that only the factor of Pay

demonstrated significance between small and large districts with small districts being more

satisfied than large districts.

Analysis by school level demonstrated significant differences between groups on the

factors of Supervision, Colleagues, Working Conditions, Pay, Responsibility, and Work Itself.

Elementary school teachers were more satisfied than senior high school teachers on all these

factors, except supervision.

Location

Lester, P. (1984). Development of an instrument to measure teacher job satisfaction. *Dissertation*

Abstracts International, *44*, 3592. (University Microfilms No. 84-06,298).

Table D1

Definition of Nine Final Factors of Teacher Job Satisfaction Questionnaire

Factor	Definition
Supervision	The task-oriented behavior and person-oriented behavior of the immediate supervisor.
Colleagues	The work group and social interaction among fellow teachers.
Working Conditions	The working environment and aspects of the physical environment.
Pay	Annual income.
Responsibility	The opportunity to be accountable for one's own work and the opportunity to take part in policy or decision-making activities.
Work Itself	The job of teaching or the tasks related to the job. The freedom to institute innovative materials and to utilize one's skills and abilities in designing one's work. The freedom to experiment and to influence or control what goes on in the job.
Advancement	The opportunity for promotion.
Security	The school's policies regarding tenure, seniority, layoffs, pension, retirement, and dismissal.
Recognition	Some act of notice, blame, praise, or criticism.

Table D2

Coefficients of Internal Consistency of the Teacher Job Satisfaction Questionnaire

Factor	Raw score range	N	X^2	SD	Alpha
Supervision	14 to 70	14	48.69	10.61	.92
Colleagues	10 to 50	10	36.33	5.59	.82
Working Conditions	7 to 35	7	22.29	5.37	.83
Pay	7 to 35	7	18.22	5.22	.80
Responsibility	8 to 40	8	33.91	3.48	.73
Work Itself	9 to 45	9	33.29	5.56	.82
Advancement	5 to 25	5	12.3	4.01	.81
Security	3 to 15	3	10.5	2.76	.71
Recognition	3 to 15	3	9.09	2.76	.74
Totals		66	224.54	28.33	.93

Note. $N = 526$.

Table D3

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 1

Factor	Factor Loading	Item	h^2
Supervision	.795	17. My immediate supervisor gives me assistance when I need help	.661
	.779	62. My immediate supervisor praises good teaching	.677
	.760	40. My immediate supervisor provides assistance for improving instruction	.644
	.705	10. I receive recognition from my immediate supervisor	.640
	.688	*24. My immediate supervisor does not back me up	.536
	.661	60. My immediate supervisor explains what is expected of me	.506
	.647	*43. My immediate supervisor is not willing to listen to suggestions.	.523
	.632	31. My immediate supervisor treats everyone equitably	.459
	.628	*56. My immediate supervisor makes me feel uncomfortable	.531
	.626	59. When I teach a good lesson, my immediate supervisor notices	.522
	.618	12. My immediate supervisor offers suggestions to improve my teaching	.521
	.585	53. My immediate supervisor makes available the material I need to do my best	.366
	.579	*5. My immediate supervisor turns one teacher against another	.435
	.567	*47. I receive too many meaningless instructions from my immediate supervisor	.480

Notes. [a]Eigenvalue = 13.106; variance = 18.7; cumulative variance = 18.7. *Indicates reversed items. (n = 14)[a].

Table D4

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 2

Factor	Factor Loading	Item	h^2
Colleagues	.686	20. I like the people with whom I work	.586
	.641	*48. I dislike the people with whom I work	.517
	.633	*66. My colleagues seem unreasonable to me	.492
	.564	15. I get along well with my colleagues	.433
	.496	*41. I do not get cooperation from the people I work with	.405
	.489	32. My colleagues stimulate me to do better work	.494
	.463	*37. My colleagues are highly critical of one another	.276
	.459	54. I have made lasting friendships among my colleagues	.313
	.436	51. My interests are similar to those of my colleagues	.254
	.370	39. My colleagues provide me with suggestions or feedback about my teaching	.363

Notes. [b]Eigenvalue = 5.194; variance = 7.4; cumulative variance = 26.1. *Indicates reversed items. ($n = 10$)[b].

Table D5

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 3

Factor	Factor Loading	Item	h^2
Working Conditions	.781	55. Working conditions in my school are good	.737
	.710	18. Working conditions in my school are comfortable	.628
	.626	*35. Physical surroundings in my school are unpleasant	.479
	.502	*16. The administration in my school does not clearly define its policies	.450
	.493	28. The administration in my school communicates its policies well	.397
	.486	*26. Working conditions in my school could not be worse	.322
	.474	*9. Working conditions in my school can be improved	.306

Notes. [c]Eigenvalue = 4.094; variance = 5.8; cumulative variance = 32.0. *Indicates reversed items. ($n = 7$)[c].

Table D6

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 4

Factor	Factor Loading	Item	h^2
Pay	.717	*44. Teacher income is barely enough to live on	.575
	.697	2. Teacher income is adequate for normal expenses	.509
	.669	61. Teaching provides me with financial security	.575
	.565	36. I am well paid in proportion to my ability	.399
	.524	*57. Teacher income is less than I deserve	.339
	.522	*4. Insufficient income keeps me from living the way I want to live	.322
	.345	65. Pay compares with similar jobs in other school districts	.183

Notes. [d]Eigenvalue = 2.723; variance = 3.9; cumulative variance = 35.9.*Indicates reversed items. ($n = 7$)[d].

Table D7

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 5

Factor	Factor Loading	Item	h^2
Responsibility	.545	64. I get along well with my students	.357
	.500	58. I try to be aware of the policies on my school	.294
	.489	*63. I am not interested in the policies of my school	.286
	.462	38. I do have responsibility for my teaching	.250
	.455	22. My students respect me as a teacher	.359
	.441	34. I am responsible for planning my daily lessons	.254
	.438	19. Teaching provides me the opportunity to help my students learn	.376
	.421	*52. I am not responsible for my actions	.239

Notes. ^eEigenvalue = 2.531; variance = 3.6; cumulative variance = 39.5. *Indicates reversed items. (n = 8)^e.

Table D8

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 6

Factor	Factor Loading	Item	h^2
Work Itself	.596	*27 Teaching discourages originality	.507
	.589	25. Teaching is very interesting work	.557
	.574	42. Teaching encourages me to be creative	.493
	.458	*30. Teaching does not provide me the chance to develop new methods	.447
	.432	*7. The work of a teacher consists of routine activities	.244
	.427	3. Teaching provides an opportunity to use a variety of skills	.366
	.394	*45 I am indifferent toward teaching	.360
	.352	*11 I do not have the freedom to make my own decisions	.360
	.335	46. The work of a teacher is very pleasant	.344

Notes. [f]Eigenvalue = 2.130; variance = 3.0; cumulative variance = 42.5.*Indicates reversed items. n = 9)[f].

Table D9

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 7

Factor	Factor Loading	Item	h^2
Advancement	.724	50. Teaching provides a good opportunity for advancement	.639
	.720	33. Teaching provides an opportunity for promotion	.649
	.642	1. Teaching provides me with an opportunity to advance professionally	.512
	.499	*21. Teaching provides limited opportunities for advancement	.280
	.494	*8. I am not getting ahead in my present teaching position	.460

Notes. [g]Eigenvalue = 1.779; variance = 2.5; cumulative variance = 45.1. *Indicates reversed items. (*n* = 5)[g].

Table D10

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 8

Factor	Factor Loading	Item	h^2
Security	.675	*23. I am afraid of losing my teaching job	.491
	.652	13. Teaching provides for a secure future	.545
	.551	*29. I never feel secure in my teaching job	.429

Notes. [g]Eigenvalue = 1.567 variance = 2.2; cumulative variance = 47.3.*Indicates reversed items. ($n = 3$)[h].

Table D11

Factor Loadings, Communalities, Eigenvalues, Percent of Variance, and Cumulative Variance of Teacher Job Satisfaction Questionnaire: Factor 9

Factor	Factor Loading	Item	h^2
Recognition	.468	14. I receive full recognition for my successful teaching	.520
	.460	*6. No one tells me that I am a good teacher	.445
	.399	*49. I receive too little recognition	.470

Notes. [i]Eigenvalue = 1.462; variance = 2.1; cumulative variance = 49.4. *Indicates reversed items. (n = 3)[i].

Table D12

RECODE and COMPUTE Statements

TJSQ			
RECODE	V4, V5, V6, V7, V8, V9, V11, V16, V21, V23, V24, V26, V27, V29, V30, V35, V37, V41, V43, V44, V45, V47, V48, V49, V52, V56, V57, V63, V66, (5 = 1) (4 = 2) (3 = 3) (2 = 4) (1 = 5)		
COMPUTE	SUPERV	=	V5 + V10 + V12 + V17 +V24 + V31 + V40 + V43 + V47 + V53 + V56 + V59 + V60 + V62
COMPUTE	COLLEAG	=	V15 + V20 + V32 + V37 + V39 + V41 + V48 + V51 + V54 + V66
COMPUTE	WORK COND	=	V9 + V16 + V18 + V26 + V28 + V35 + V55
COMPUTE	PAY	=	V2 + V4 + V 36 + V 44 + V57 + V61 + V65
COMPUTE	RESPONS	=	V19 + V22 + V34 + V38 + V52 + V58 + V63 + V64
COMPUTE	WORK	=	V3 + V7 + V11 + V25 + V27 + V30 + V42 + V45 + V46
COMPUTE	ADVANCE	=	V1 + V8 + V21 + V33 + V50
COMPUTE	SECURITY	=	V13 + V23 + V29
COMPUTE	RECOGN	=	V6 + V14 + V49
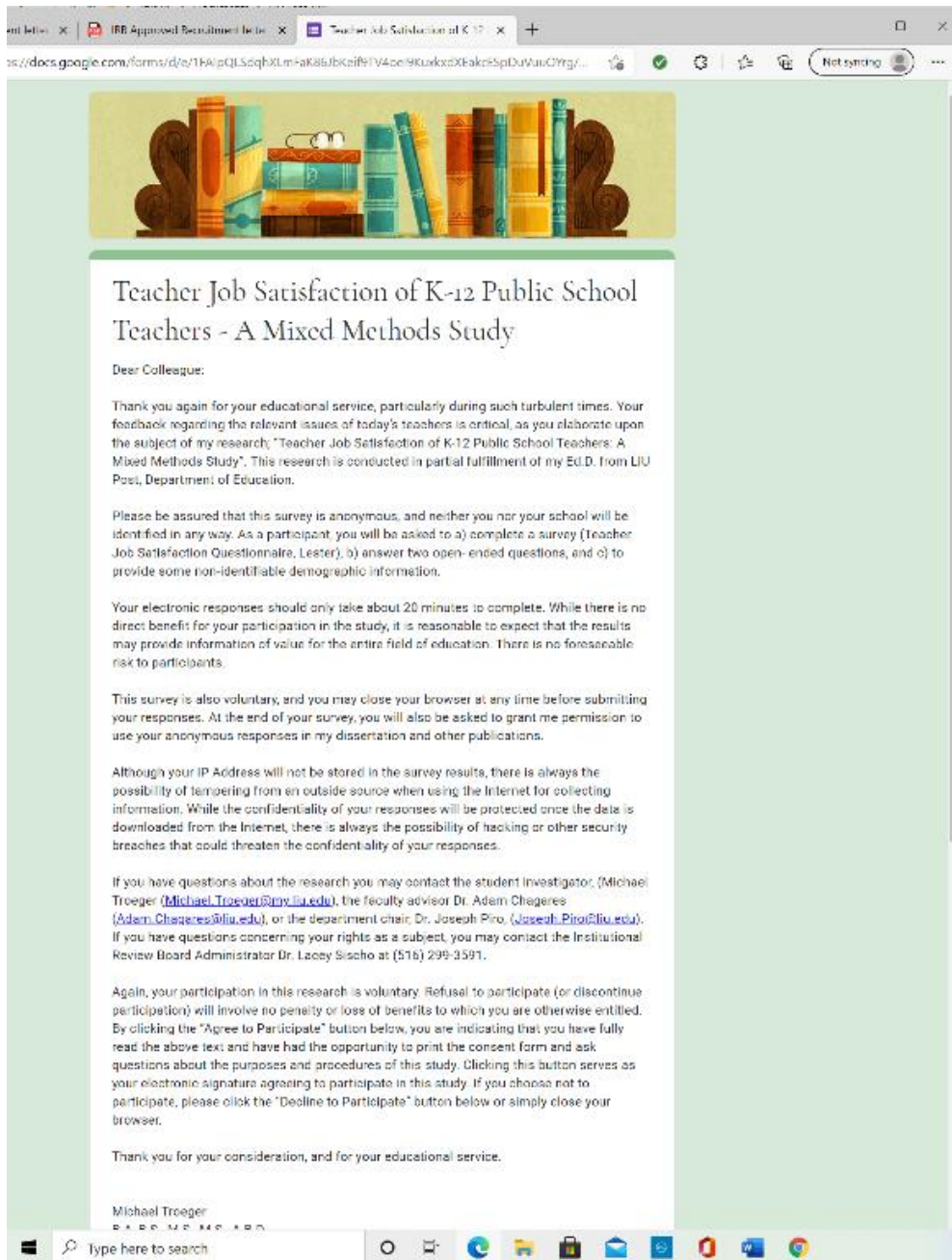
Appendix E:

Teacher Job Satisfaction Documents

Figure E1

Invitation, Consent, and Link to Study

Figure E2

LIU IRB Approval

LONG ISLAND UNIVERSITY
UNIVERSITY OFFICE OF SPONSORED RESEARCH
BUSH-BROWN HALL, UNIVERSITY CENTER

NOTICE TO ALL RESEARCHERS:
Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation, suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

TO: Adam Chagares - Principal Investigator
MaryAnn Seelke, Ed.D. - Dissertation committee member
Michael Troeger - Student Investigator
Robert Wottawa, Ed.D. - Dissertation committee member

FROM: Dr. Lacey Sischo, IRB Administrator
LIU Institutional Review Board

DATE: April 29, 2021

PROTOCOL TITLE: Teacher Job Satisfaction Among K-12 Public School Teachers: A Mixed Methods Study

PROTOCOL ID NO: 21/04-066

REVIEW TYPE: Exempt

ACTION: **IRB Exempt Determination/Approval**

Your application has been reviewed using the University's Institutional Review Board's (IRB) administrative review process and can be considered to be an EXEMPT methodology/approach as defined in 45 CFR 46.104.d.2:

Category 2: Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: i. The information obtained is recorded by the investigator in such a manner that identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects, ii. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation, or iii. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subject, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Please note: Revisions and amendments to the research activity must be promptly reported to the IRB for review and approval prior to the commencement of the revised protocol. **If the project is amended so that it is no longer considered to be exempt research as per the federal definitions, it will be necessary for the investigators to submit an application for full committee review.**

Figure E3

LIU IRB Approved Recruitment Letter

IRB Protocol # 21.01.060
Approval: April 25, 2021
LIU Sponsored Projects

LONG ISLAND UNIVERSITY/ POST CAMPUS

Dear Colleague:

Please allow me to say thank you for your educational service, particularly during such turbulent times. A difficult year, such as this past one, only magnifies the role teachers play in students' learning. However, the factors that relate to teachers' job satisfaction is different in every school and even between teachers.

To that end, I am conducting this survey as part of my doctoral dissertation in order to better understand teacher job satisfaction. This survey is *anonymous*, and neither you nor your school will be identified in any way. As a participant, you will be asked to *a)* complete a survey (*Teacher Job Satisfaction Questionnaire*, Lester), *b)* answer two open-ended questions, and *c)* to provide some non-identifying demographic information.

Your responses should only take *about 20 minutes* to complete. While there is no direct benefit for your participation in the study, it is reasonable to expect that the results may provide information of value for the entire field of education. Although your participation is completely *voluntary*, the survey link can be found at: https://forms.gle/HSCgDeFmv6fjim9h6

If you have questions about the research you may contact the student investigator, (Michael Troeger (Michael.Troeger@my.liu.edu), the faculty advisor Dr. Adam Chagares (Adam.Chagares@liu.edu), or the department chair, Dr. Joseph Piro, (Joseph.Piro@liu.edu). If you have questions concerning your rights as a subject, you may contact the Institutional Review Board Administrator Dr. Lacey Sischo at (516) 299-3591.

Thank you for your consideration, and your educational service.

CLICK HERE

Michael Troeger
B.A., B.S., M.S., M.S., A.B.D.
Doctoral Candidate and Study Director
Long Island University, Post Campus

Figure E4

TJSQ Instrument Consent

Paula Lester <Paula.Lester@liu.edu>   Nov 9,
                                                                                          2020,
                                                                                          4:53 PM

to me

Here it is with my blessing!

From: Michael Troeger <michael.troeger@my.liu.edu>
Sent: Monday, November 9, 2020 12:51 PM
To: Paula Lester <Paula.Lester@liu.edu>
Subject: Re: TJSQ

Awesome, thank you so much!

On Mon, Nov 9, 2020 at 10:27 AM Paula Lester <Paula.Lester@liu.edu> wrote:
Michael,

So good to hear from you.

I will gladly send the TJSQ Manual a little later today.

Keep up the good work. You should be able to move along nicely now and finish this spring. That is a major achievement!!!!!!!!!!!!!!!

Dr. L.